

REJUVENATION OF CENTRAL BUSINESS DISTRICTS:
CASE STUDY IN ANN ARBOR, MICHIGAN

by

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INTRODUCTION

"Central business district" is the term denoting the commercial, office and governmental functions which tend to group in the central portions of the city. The initials CBD are used in an abbreviated form to denote this area.

The CBD of cities is where the city had its birth. It may have started with a general store and expanded from this point. In time cities grew and the CBD took on these other functions. A problem facing cities today is one of revitalizing the CBD area because of the limited facilities of the establishments with new merchandise methods and the obsolescences which have become apparent with age.

Ann Arbor, physically is divided into three separate commercial areas in the CBD. They are Main Street, the oldest area in years, and the State Street and South University shopping areas developed because of the need provided by the University of Michigan.

In December 1960, the Ann Arbor City Planning Commission and the Chamber of Commerce jointly approved the document titled, "Recommendations for the Development of a Master Plan for the Central Business District of Ann Arbor, Michigan".

The months immediately following were devoted to the raising of funds for financing the projected study, to staff and consultant recruitment, as well as the preparation, review and approval of the CBD Outline.

By summer's end, the CBD Study program was fully operative. The six weeks prior to the first major two day staff consultant

conference, held on October 16th. and 17th., provided the occasion for preliminary staff activity, consultant orientation, and finalization of contractual relationships.

This two day conference was the first of many proposed to take place during the remaining nine months of the CBD Study.

A number of purposes were achieved at the staff-consultant conference, with the following being the more significant:

1. Those directly and intimately involved were provided the opportunity to get acquainted, to take the measure of the problems facing the study, and to experience and review the critical aspects of the factors affecting problem solution.
2. The consultants took advantage of the occasion to define with precision the staff assignments, and to outline the material which will require assembly and preparation.
3. The staff and consultants were able, for the first time, to discuss on a face-to-face basis, the realities confronting the CBD, and to range in the broadest terms over the variety of possible alternatives available to the CBD, as it attempts to influence its future growth, change and development.
4. The first of a series of joint conferences was held among the staff, the consultants, the Planning Commission and the CBD Master Plan Sub-Committee.

The two major spheres of action and decision demanding immediate attention were roughly as follows:

1. The assembly of data and information, their integration, evaluation and analysis as necessary.

- a. To define accurately the CBD problem areas.
 - b. To explore intelligently the achievable alternatives available to the CBD (as against an infinite, though unachievable number of theoretical solutions);
 - c. To influence wisely in the first instance, and to support in the final instance, the ultimate design and program solution.
2. The refinement of concepts which are critical to the development of the CBD plan and program. In this connection, it may be of value to recite a few of the possible directions already discussed by staff and consultants, as suggestive of the major importance of this step.
- a. Does the future of the CBD reside in a gigantic expansion program challenging the outlying shopping centers frontally and competing with them on their terms?
 - b. Is it desirable, and possible, to move in the direction of the consolidation or further separation between the State Street, which is contiguous with the University of Michigan campus and Main Street some four blocks east of State Street?
 - c. Does the strength of the CBD of the future depend upon the transformation in the character of the CBD to special purpose uses, the reinforcement of its "high quality functions", and/or its office,

professional service, variety, and traditional activities?

This recitation, although oversimplified with relation to ultimate conceptual treatment, is presented here to indicate the prime dilemmas and challenges facing the study.

The need to approach the entire study on a regional, metropolitan and City wide basis was apparent. Thus, the relationship of Ann Arbor to Detroit, the current and future population movements, concentrations and distribution within the entire metropolitan area, the location and impact of the existing and proposed highway and expressway system, the pattern of future industrial land utilization, and the future anticipated residential growth, all become important elements providing the context for study and will influence, in varying but important degrees, the direction of final solutions. In addition, the character and scale of outlying shopping center development, the probable distribution of the consumer dollar, and the inherent strengths of the CBD itself are all necessary to complete the picture.

Although there may be merit from a public point of view in continuing to identify the study as a "CBD Study", the study, if truly effective, must, in fact, be a "Central Area Study". This is to suggest, that, in addition to the comprehensiveness which results from the incorporation of the role of State Street, Main Street, and South University areas, major attention must also be paid to the function of related and integrated activities (housing--new and existing, possible new

uses, conference and convention facilities, motels, etc.), the Medical Center, and the University of Michigan itself.

The distinctiveness of the State Street and South University areas, the special quality of many of the shops in the Main Street Area--their variety, their interest, and their charm--must, in some form, be captured, or retained, thoroughly in keeping with the character of Ann Arbor, as a delightful, tree-lined blend of the old and the new, in sharp contrast to the starkness and sterility of the new shopping developments. These are the assets of the downtown shopping areas and probably provide the key to final concept delineation.

CHAPTER ONE

HISTORICAL BACKGROUND OF ANN ARBOR, MICHIGAN

Ann Arbor might be termed a town that is typically American. It has, perhaps, a cosmopolitan note provided by the University, but its flavor, its industry, community spirit, political outlook, its link with the past, proclaim the city to be fundamentally American.

Settled before Michigan became a state, Ann Arbor's foundations were laid in the traditions of ancestry and pride of family of its first inhabitants. It was distinctly colonial in pattern. In the period after the War of 1812 a steady stream of emigrants set their faces toward the west. They came from Virginia, from New England States, from New York, lured by

richer soil and greater room for themselves and their children. Their migration is a pageant that has been written into American history.

Those who settled in Ann Arbor were young, for the most part men and women in their early twenties. They brought with them the political independence, religious thinking, and desire for education that characterized their old Puritan training. The character of Ann Arbor was determined to a great extent by conditions in the states from which they came.

Before the settlement was scarcely more than a year old, immigrants of another type began to arrive: South Germans, who sought in America a freer atmosphere than was possible in Germany, following the wars of Napoleon, and the Irish, who braved three thousand miles of ocean to find homes in the new world where they could work and worship as they pleased. These new arrivals speedily became an important factor in Ann Arbor life, and identified themselves wholly with their new home.

The growth of Ann Arbor, the State of Michigan, and the University was concurrent. They had their beginnings at the same time and under the same conditions. Fortunately for the University, Ann Arbor has not had a rapid industrial expansion; the University has grown proportionately far more than the town. Fortunately, too, for the town, the University unquestionably has had its influence on the type of industry brought to Ann Arbor, an influence that has resulted in highly specialized products, and employment of skilled workers that these products demand. As a result, Ann Arbor has retained a distinctive charm

that has made it one of the most attractive academic centers in the country.

The first known white man to traverse this area was LaSalle, who, in 1680, followed the Huron River on his route from Lake Michigan to Niagara, and must have passed through the very site of Ann Arbor. Otherwise, the district was left pretty much to the Indians, except for occasional fur trappers until 1823, when John Allen of Virginia left his family and set out deliberately to go into the wilderness of the west and build the town of his dreams. He sought a region where the soil was rich, and where cattle, grains and sheep could be raised, where timber, water power, and materials for making brick and mortar were abundant. It is probable that he had some knowledge of the place toward which he journeyed. Wonder tales of the west were familiar to every lad on the eastern seaboard.

Joined by Elisha Walker Rumsey and his wife Mary Ann, and later by Daniel Cross, Allen passed through Detroit, which was then still a French fur trading post practically beyond the confines of civilization; in all of Michigan Territory there were at that time, but 10,000 people. The party pushed on along the banks of the Huron until, on February 17, 1824, they reached the rolling hills in the bend of the river, which Allen decided was the site for which he had searched.

The land lay in the valley of the swiftly flowing Huron, a river so called from a tribe of Indians which had, for generations, lived near its mouth. Surrounded by gently sloping hills, the site held all the natural resources that a new community demanded: water power, forests, grazing land, and,

more important to these pioneers, unlimited space for growth. Near at hand was a rolling open place dotted here and there with wild plum trees, burr-oaks, hazel bushes and grape vines. Here the Chippewas, Hurons, Pottawatomies and Ojibways had long held their tribal dances, and councils of war and peace; and here, after the advent of the white man they continued to come to be fed and to barter fur, cranberries, and wild honey for cloth, whiskey and other materials, a thriving trade that continued for years. The name of the county itself, Washtenaw, is a name derived from a compound Chippewa word--Wushte-nong, or Wushte-nong, meaning the land beyond, the further country.

The Indians were uniformly friendly, even though the settlers looked upon them with a certain degree of apprehension. There were, indeed, other dangers that constantly threatened, among them the wolves, which ran in great packs; marauders that disturbed the night with howling, and slaughtered the sheep and the deer. However, wildcats, lynx, fox, beaver and an occasional bear made fur trapping profitable; wild turkey, an abundance of smaller birds, and fish provided food for the table.

Growth of population occurred almost at once; it was necessary that the hamlet be named. The Indians had called it KAW-NICK-GOOSH-NICK, but the name Ann Arbor was recorded in the office of the Register of Deeds in Detroit as early as May, 1824. Much of the work of the tiny settlement was done out of doors; the two Ann's, Mary Ann Rumsey and Ann Allen, had enlarged and beautified a wild grape arbor near the bank of Allen's Creek

where they spent long afternoons sewing and washing. They called this nook "Ann's Arbor" and it was not long before the whole settlement was so called, although the name was shortened to Ann Arbor when the town was formally named. As far as can be learned, it is the only town by this name in the world.

By 1825 there were nine log houses; by 1833, 800 inhabitants. From the beginning the town was planned for future growth. Streets were mapped out; school, church and court house followed the first few houses. At the corner of Main and Ann Streets the first school was built in 1825, a small hollow pile of logs, with windows but eight inches square. Teachers were paid about \$1.00 per week with board, and "boarding the teacher" was expected of families that had children in school.

The pupils in this first school were all small children, but in 1829 a school was opened for those who had advanced beyond the first grade. Here Latin and Greek and higher branches of an English education were taught: ambitious curriculum for a frontier town not yet six years old! When this school was given up in 1832, with Ann Arbor not yet advanced to the dignity of a village, an Academy was opened in the rude building that housed the Presbyterian Church. The Academy was considered the best of its kind in the whole Territory, and attracted pupils from all sections. Here were taught the ancient languages, and higher mathematics. Beginning in 1829 private schools appeared in succession, correlating the population growth, and the University was soon to come.

Even before this time, the hamlet was the seat of justice for the county. The first business of a strictly judicial

nature which came before the first session of the court in 1827 was the trial of Erasmus Priest, indicted by an empaneled Grand Jury for selling liquor in less quantities than one quart without a license. The matter was committed to the jury, who deliberated for two hours and rendered a verdict of not guilty. The defendant was discharged. Other early matters for the court were granting of tavern licenses, and a license to Reverend William Page to celebrate the rite of matrimony.

Church services were held almost immediately after the first families arrived. For a while they were irregular, and held when a minister happened to be passing through. Methodist circuit riders made fairly regular visits to the community. It was in August, 1826, that the first church organization was effected in Ann Arbor. Presbyterian in form and housed in the log school house. It was not long before the congregation outgrew this space, and a church building was erected in 1829. By the year 1840 there were five churches in Ann Arbor, each in its own church building: Presbyterian, Methodist, Baptist, Lutheran, and Catholic.

In the year 1829 the first newspaper in Ann Arbor made its appearance. This was the WESTERN EMIGRANT, which had the field to itself until 1836, when it was merged with the STATE JOURNAL, and was finally succeeded by the ARGUS, started in 1840. Two weekly papers in the German language were in existence for some years prior to 1895.

By the late 'seventies, Ann Arbor was the most thriving business center west of Detroit. Banks, public buildings,

manufacturing plants, grew and expanded. Railroads connected the area with the outside world:--the first passenger train of the Central Railroad had puffed into Ann Arbor on October 16, 1839. Hardships of travel, mail service, communication, were becoming things of the past. Improvements in roads, parks, cemeteries, bridges, homes, sanitation and public health became matters of civic consciousness and civic pride.

CHAPTER TWO

EXAMPLES OF CBD STUDIES

A great many cities are now or have been engaged in the study and implementation of their Central Business District. The complexity of the problem and the dissimilar situation of these individual cities has reflected a number of different solutions. Briefly listed are the objectives of other American cities conducting CBD studies in one manner or another.

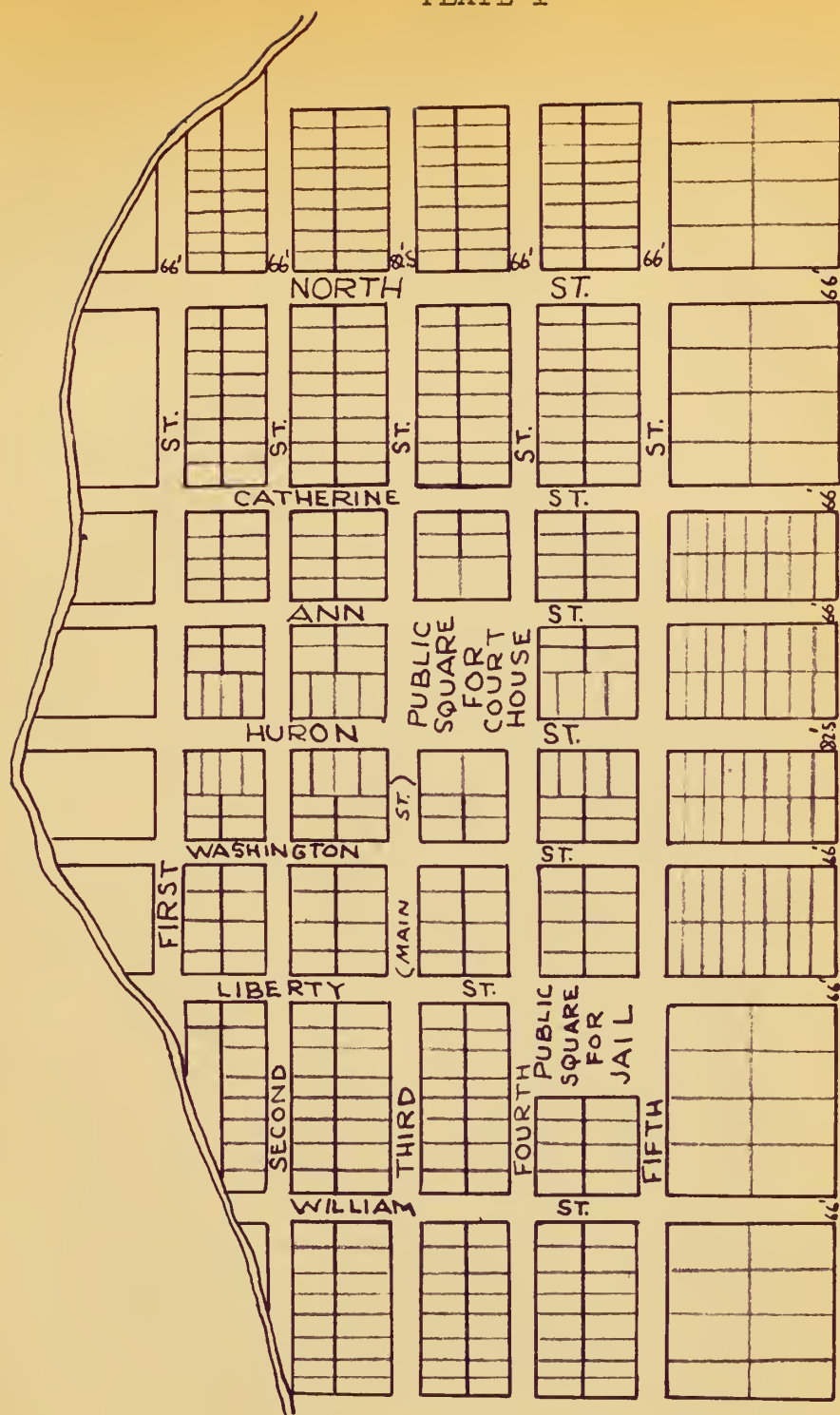
Stamford, Connecticut

Stamford's CBD study has many points which will be brought out later on as they were developed in the Ann Arbor study.

Stamford's objectives are as follows:

1. Development Plan for Downtown.
2. Road improvements and parking with an "inner ring".

PLATE I



ORIGINAL PLAT
 SURVEYED 1824
 NO SCALE

3. Pedestrian Malls--better accessibility to parking provided by the "inner ring" would allow the closing off of minor streets and make possible martial "mall" treatments, which would free the shopper of concern for vehicular traffic and provide a rest stop.
4. Multi-Family Housing--close proximity to the CBD.

The Planning Board is of the opinion that the CBD of Stamford should be treated as a whole planning unit and that each segment has its proper relationship.

This is an undertaking that however complex, must be recognized as only the initial step in the eventual revitalization and modernization of the entire CBD.

Muskegon, Michigan

Today:

1. Existing downtown, since World War Two has seen over four million dollars expended in property improvements.
2. A one-street shopping center.
3. Western Ave. doubles as a pedestrian shopping street and as important traffic thoroughfare.

Tomorrow:

1. Vehicular traffic will arrive by the way of an Expressway.
2. New Parking Areas will provide convenient terminal parking at the entrance to CBD.
3. Pedestrian streets or malls will develop to carry foot traffic.

4. New Business will develop to take advantage of these new pedestrian patterns.
5. Automobiles will circulate around the CBD as a new traffic loop.

Rome, New York

Rome, New York, population wise, is approximately the size of Ann Arbor but different in accent.

The CBD Plan is a generalized guide to the growth of the area.

Recommendations:

1. The concentration of retail and service activities within a Commercial Core.
2. The elimination of industrial, mixed residential-commercial, and residential uses from the Commercial Core.
3. The renewal of the proposed residential sections as previously outlined in the Neighborhood Analysis report.
4. The placement of future public buildings so as to develop a well organized Civic Center.
5. The concentration of office uses on the proposed Residential and Office Center.
6. The development of a circulation system which will eliminate detrimental through-traffic from the central area and provide easy access to all points of the CBD.

7. The development of adequate, convenient, and strategically located parking facilities which can be shared by the various land use groups of the CBD.

Circulation Plan:

Consists of the interrelated elements of the Traffic Plan, the Parking Plan, and the Pedestrian Circulation Plan.

CBD By-pass and Interchange:

To eliminate unnecessary crosstown and out-of-town through traffic. The by-pass will contribute to the Commercial Core's revitalization. It will also enhance the commercial character and atmosphere, also a 15-foot wide median strip recommended.

Traffic Circulation System:

Designed to encircle rather than bisect the Commercial Core.

Parking Plan:

To provide enough for present and future needs.

Pedestrian Circulation Plan:

A need for safe and protected walkways in the Core. Provide also for a relaxation atmosphere while shopping.

San Jose, California

San Jose gave more thought to the utilization of the CBD for a longer period of time in their objectives and solutions as follows:

Downtown's growth potential will be realized only if two conditions are met:

1. Improve downtown immediately.

Market growth in how many years will be the greatest?

2. A comprehensive plan is needed.

Changes in all forms of urban life.

A transportation system is useless without proper parking and freeway access.

What is the CBD going to be? Commercial only? Cultural?

Courts, arcades and plazas and direct entrances to store and office buildings from garages in the center of superblocks.

Most streets will be kept open to give the core a vital sense of activity.

Gardens apartments to restore the appeal of downtown living.

Keep the core alive at night.

Today's congestion is caused primarily by through traffic-- Freeway loop systems--solution.

Also eliminate curb parking.

Install One-Way streets--systematically.

Transit:

Subway.

Shopping--Office Center

Three Public Plazas--walking distance to offices and shops.

Market Street Plaza

Garage and bus terminal underneath.

Department store on the west side of Plaza.

Commercial service establishments will be replaced by retail stores, as property values rise.

San Pedro Plaza

Center of an office group. Connected by shopping mall.

Two levels of parking beneath the Plaza.

San Antonio Plaza

Cushing fountains as focal point.

Street lined with high-fashion.

Women's shops, airline ticket office, speciality shops and cafes.

Evanston, Illinois

Evanston, Illinois had a very simple explanation to their CBD problems which amounted to a traffic and parking study.

Objectives:

1. Provide better more convenient access to the CBD.
2. Supply more parking space geared to meet parking demands.
3. Improve traffic circulation of both pedestrians and vehicles.
4. Sidetract unnecessary traffic and the all-day parker to streets and areas not used by traffic circulation.
5. Provide good municipal services.
6. New lighting.

This example of a CBD study has a simple solution with a limited amount of study.

Cincinnati, Ohio

Cincinnati expanded on the traffic and parking situation with the addition of the following objectives and solutions:

1. Improve concentration and accessibility because the locational advantages of the CBD district depend on concentration of business activities and accessibility to the entire Metropolitan Area.
2. Separate the different forms of transportation because congestion is reduced when conflicts are removed.
3. Improve pedestrian movement in areas of greatest concentration because automobile mobility decreases as concentration increases, and the limited space is more effectively used for pedestrians.
4. Improve the attractions of the Central Business District, including appearance, because the ability to attract people to the Central Business District is as important as the ability to accommodate them when they are there.

An expressway was built so that it will remove all traffic that now must go through and across the business district reducing the present traffic burden on the Central Business District streets.

A total of \$7.141 million is to be used to create a shopping center in the heart of the City, in which underground garage and bus terminal, major department stores, hotels, specialty shops and office buildings would be connected by pedestrian plazas.

No suburban regional shopping center built for that amount could equal the store space in the downtown area, nor could a suburban shopping center equal the advantages of a transit system that can carry more people than come by car.

Baltimore, Maryland

Baltimore tried to become progressive and elaborate in its objectives and solutions with the following outline:

ELEMENTS

Adequate size and dramatic appeal, feasibility without federal aid, creation of opportunity for new investment, diversification of market potential, creation of incentives for rehabilitating adjacent properties, elimination of blighted, uneconomic, unstable and socially undesirable land uses, and contribution to solving larger traffic, parking and transit problems.

(The thinking here and decisions which had to be made were a credit to their solution.)

STUDIES

Detailed studies of future street patterns, parking, acquisition costs and relocation.

PRINCIPLES

1. Open space.
2. The inclusion of intensive mixture of uses.
3. Separation by a system of pedestrian walkways.
4. Grouping of major superblocks.
5. Parking, underground (4000 cars) and peripheral.

FUNCTIONAL MODEL OF FUTURE CBD

The underlying conceptual framework was the achievement of a balanced arrangement of future functions in the CBD. This functional model of the future was created from a combination of three general economic analyses.

1. Economic potential of the function: from regional and CBD forecasts, determination was made of the potential for increased, stable, or declining levels of activity, employment, and floor space in each function. This finding was then modified by further data from subsequent studies.

2. Locational analysis: the basic efficiency of a central location for carrying out each function was analyzed. A determination was made of the possibilities for feasible use of high-value central sites for each use. This study involved an intensive examination of the past and future dispersion--or concentration--tendency of each activity.

3. Linkages and compatibility: investigation of the positive or negative effects of a use on adjacent activities, and the extent to which activities are mutually supportive or linked.

The goal of the CBD program is to create the highest aggregate economic value and return consistent with important social values. This goal should coincide with the development of the highest aggregate

property values and thereby the highest total property-tax return to the city.

Mount Clemens, Michigan

Plan for Downtown Redevelopment:

1. Relieve congestion by removing conflicts between pedestrians and vehicles.
 - a. Perimeter Street: Encompassing Downtown will intercept incoming minor streets and direct shopper traffic to off-streets parking lots. Through traffic will be routed around the business district.
 - b. Off-Street Parking Lots: Will accommodate projected Downtown demand.
2. Boost Trade Volumes: By catering to the shopper's pleasure, convenience, and safety. Pedestrian given preference over the automobile; pedestrian plazas with landscaping.
3. Historic Relationship to Water. Opening up views and pedestrian access to the river. Boat landings for pleasure--perhaps also for shopping.
4. Establish Functional Relationship To Government and Commerce: Creating a Civic Center.
5. Accent Downtown As A Community Focal Point: Complete recreation center close by.

Portland, Maine

Four basic proposals, designed to meet the needs and objectives to make up the Comprehensive Downtown Plan. Each is an element of the total program.

1. Access-Expressway System to provide improved access to the CBD.
2. Circulation--To provide for the most efficient movement of people and vehicles within the CBD.
 - a. Ring Road--Encircling the heart.
 - b. Penetration Streets--To provide access to parking facilities, pedestrian pick-up points and enable all types of service vehicles to enter and leave with a minimum of delay. With few exceptions these will be one-way in direction and designed to reduce traffic conflict. Also widening, repaving and extensions of streets.
 - c. Loading areas--Provided because of the closing of some streets.
 - d. Bus Routes--Reroutings for buses as a vital element of the total scheme.
 - e. On-Street Parking--A need to remove on-street parking.
3. Walking--Provide for free movement for pedestrian, (Workers, shoppers, visitors) Malls and promenades.
4. Parking--An expansion of off-street parking, lots, garages, and underground.

Grand Rapids, Michigan

CBD Rejuvenation goals:

1. Good traffic access from the city as a whole.
2. Free and moving internal vehicle circulation.
3. Separation of vehicular and pedestrian traffic.
4. Off-street parking within reasonable walking distance.
5. A compact retail area and shopping conveniences.
6. Provision for adequate mass transit routes.
7. Attractive shopping and business atmosphere.
8. Expressed open areas and landscaping.

St. Petersburg, Florida

St. Petersburg adopted a very simplified, substitute outline for a CBD study. It is as follows:

Towards a more vital Central Core:

1. Land Use: For better organization of commercial, residential and public and semi-public activities.
2. One-Way Streets: To relieve traffic tie-ups, using existing streets and rights-of-way.
3. Belt-Loop Expressway: Elevated, limited access highway to service CBD area.
4. Parking Program: Provide and finance additional off-street facilities.
5. Pedestrian Mall: For on-foot traffic in CBD.
6. Improved Mass Transit System.

7. Parks and Recreational Areas: Renovation and organization of uses to realize greatest recreational potential.

8. Civic Center: Auditorium, government buildings.

These examples will be magnified in the study. If all the points stated in these cases were put into one study it would begin to show the magnitude of this Ann Arbor study.

It can be readily found that the problems are very similar in each city cited. The more basic problems appear to be access to the CBD, parking, traffic circulation which includes diverting unwanted through traffic, street lighting, appearance and open space, land uses and the separation of vehicular and pedestrian traffic.

These problems are the same that were found in Ann Arbor. The variations of other criteria would then be unique to that particular city.

The qualifications of the decision makers are made usually by a governmental body which may be either the city council or city planning commission. In Ann Arbor's case the City Planning Commission and local Chamber of Commerce joined forces to finance a CBD study.

Any CBD study which has any validity is the result of an objective, independent study rather than an illustrated stereotyped solution.

CHAPTER THREE

THE IMPORTANCE OF THE CBD TO THE CITY

The tax base of any central business district is of greatest importance to the city. This tax base may range from ten (10) to thirty-five (35) percent of the assessed valuation of the city. The identity of the CBD's usually contain the functions of commerce, office, government and entertainment.

Competition of the CBD comes from suburban shopping centers. These centers are also tax bearing but in no known case does this tax become greater in proportion than that of the CBD area.

Competition from the shopping centers in Ann Arbor is thought of more as complementary because of the difference of variety of merchandise. They may only be considered a Chamber of Commerce publicity promotion.

The importance of the commercial areas of cities is far greater than the limited extent of such areas would indicate. In most cities and metropolitan areas the central business district is by far the most concentrated center of employment and is the major focus in the systems of intra-city and inter-city transportation with which other types of land uses are closely related. Most of the central-place functions are localized in the central business districts. One group of functions, the retail, has been in recent years increasingly decentralized because of the availability of automobile transportation and the consequent decline of public mass transit. Nevertheless, the growth of outlying business centers has not significantly reduced the role of central business districts in most non-retail commercial functions, and in some aspects of retailing the older centers retain their dominance.¹

1. Readings In Urban Geography, Edited by Harold M. Mayer and Clyde F. Kohn, University of Chicago Press, 1959, p. 393.

Revival of the central business district is the immediate problem facing most cities today. While the city has grown these many years very little change has taken place downtown. Substitute methods or gimmicks have been used to help revitalize CBD areas but the opening of a new parking lot, flower pots on parking meters, colorful awnings and these many substitute methods used by cities to persuade the customer to shop in the central business area have been a complete flop. Parking is no more the solution than is a new street system within this area. The area has laid uncared for too long to hope that a mere injection of a parking lot can bring it to life once again.

Rochester, New York, a city of some 350 thousand people is an illustrative case of what can be done by private investment for helping to revitalize a CBD. In September, 1959, the city debt, exclusive of school debt, was about thirty-three million dollars (\$33,000,000). From 1959-60 the city added about eleven million dollars to its debt (\$11,000,000); in 1960-61 it added about seventeen million dollars (\$17,000,000); and in 1961-62 they expect to add another eleven million dollars (\$11,000,000). It is expected that the pace will lessen in the next eight years with only about six million dollars (\$6,000,000) added to their debt. During this entire period from 1959-1970, about forty-six million dollars (\$46,000,000) of this debt has been or will be paid. Net result of these additions and deductions according to present estimates, will be an outstanding debt of about thirty-one and a half million dollars (\$31,500,000) or something more than a million and a half dollars below the starting debt.

The improvements Rochester has made are an inner and outer loop for quick, easy, and safe access to and from the central business district to the core area and to the subdivisions which surround the project far out from the city.

Public parking garages have been installed which, in some cases, are contiguous to the department stores so that a parker need not step from his car to the street outside but go directly to the department store from his car. The parking structure spaces amount to some 1,500 while the two underground parking garages, connecting directly with the department stores by escalators and elevators, amount to another 2,000 spaces.

Slum area renewal projects have been executed and others have been planned to enhance the core area around the CBD.

A governmental center, part of the civic center, is well under the completion stage.

Midtown Plaza also is near completion. This is a project which is unique in that it is a renewal project fully undertaken through private development without federal or local financial assistance. It is in full cooperation with the City Administration and within the framework of Rochester's ultimate renewal plan. Victor Gruen and Associates are the architects for the project.

Midtown Plaza covers an area of approximately ten acres. It will include almost 1,000,000 square feet of retail space, 190,000 square feet of office space, 600 hotel units, a major public transportation terminal, and a municipal underground parking facility for some 2,000 cars.

The arcades and malls are enclosed by roofs and skylights, heated in the winter and cooled in the summer. There are 3,600 feet of enclosed frontage involving more than 50 shops, restaurants, commercial areas, two major stores and a new department store. The compact two-level plan limits the maximum walking distance between any two tenants to less than 500 feet.

Within the central mall exhibit spaces, landscaping and fountains will create an environment that is unique for this type of project in the Rochester case.

Activity generators are the new office and hotel building, a post office, and a local and interurban bus terminal; it is hoped these will add to the expected success of this project.

City-wide major improvements include the rebuilding of the fire stations, rebuilding many of the city's larger trunk sewers and its main sewage treatment plant, the redevelopment of two sub-standard areas and the redevelopment and enlargement of the water supply system.

All of these municipal activities have had an influence on private developments. Three new banks and three new motor hotels have been built. Also there exists the possibility of other hotels being developed in the near future.

The standard metropolitan area of Rochester includes all of Monroe County. The Central Business District accounts for 65-70 percent of the general merchandise volume done by all stores in the metropolitan area.

A volume potential of approximately \$17,500,000 of new business will be available to specialty shops in the Central

Business District by 1965 if physical capacities and attractions are sufficiently improved in the meantime.

This illustration of the redevelopment of the CBD area of Rochester, New York, is one example of what can be done. Ann Arbor is still in the study stage but already there have been interested entrepreneurs who are ready to make their mark in a revised CBD area.

Other American examples of CBD activity are those in Pittsburgh, Pennsylvania, and Fort Worth, Texas. Virtually every metropolitan area in the country is in some stage of development downtown or uptown, whichever term is locally proper. The important question is how they are going about solving their particular problems. Is it a conscious, coordinated attempt or a superficial substitute method to sooth the merchants and people as a whole? Can every city save its CBD area?

Two important characteristics of the city tend to be that it is the seat of city and perhaps county and/or state government and that government and commerce dominate the city image.

Central business district problems are many. But through coordinated, comprehensive planning, not only of this small area, but of the city, county and perhaps even of the state, a solution or a flexible plan can be adapted which will continue to make the CBD survive and in turn aid the total city in its proper development.

A prime objective of a city planning department in this comprehensive planning must be to make the CBD more efficient as a place to move about and to do business. Consider how easy it is to move about the stores in many outlying shopping centers. This is not to say that the CBD should copy from such shopping centers but merely to give an analogy. After all "the shopping center" is the CBD area because it was the first commercial area of any city.

Secondly, the CBD must be made more attractive by a conscious design of all the elements in the area, both inside and outside of the establishments. A mall, with trees and flowers is a conscious design solution, but it is only a beginning. Shops must be spacious, well-lighted, air-conditioned, with service in its true sense of the word. The design phase is a tremendously important part of the proper development and success of the CBD. But, beyond design, goods must be diversified and competitively priced and the merchandise displays and the merchandise itself must be carefully chosen and assembled. Thus, solutions must involve full cooperation of architects, planners, merchants and others involved.

A third objective would be to promote more activity within the area. A carnival, often tried by shopping centers, is not a real answer for activity. Other more fundamental functions, such as office buildings, motels with convention or conference centers, and a civic center or cultural center are the kinds of non-retail activities which best bring people to this area.

Fourthly, there is a need to encourage new investment in the CBD area. To begin with you must discover your assets, the liabilities and the functions of the area. After considering the needs of the entire metropolitan area which is to be serviced, it is time to establish the goals, the functions or concept to be accommodated in the revitalized study area. This then puts leaders of the area in a position to make specific proposals for the development of a comprehensive plan and a suggested means for implementation.

CHAPTER FOUR

ECONOMIC ANALYSIS

The center of the city was the function of living: recreation and worship took place as well as the economic functions of trade and manufacturing in the development of cities. As the towns grew some functions may have displaced others but at no time did the total economics of the Central Business District leave to move into another area of the city.

The Economic functions have predominated and continue to dominate such areas. Today the trend of emphasis is away from the economic functions of manufacturing and, to a degree, retailing, and toward the economic activity of management and finance.

In making an economic study the following outline may show more illustratively the amount of work which is involved.

f. Kind of study required.

A. Goals involved.

B. Existing conditions.

1. Defining the limits of the CBD area.
2. Physical characteristics.
 - a. Land use.
 - b. Structural conditions
 - c. Circulation, vehicular and pedestrian.
 - d. Parking.
3. Specific economic characteristics.
 - a. Sales volume.
 - b. Retail market value.
 - c. Land values.

C. Projections (design year).

1. Present function.
2. Future function.
3. Space needs.
4. Design arrangements of space.

D. Comprehensive Plan.

1. Concept of design.
2. Implementation.

The responsibility for the study is governmental, private, and public-private.

Downtown shopping centers are clearly destined to become dominant factors in downtown's revitalization. . . Our aim here is to point out some of the difficulties they've run into.

The first downtown shopping center has 25 diversified stores plus office space, bowling alleys, restaurants and even a drive-in movie. Its major problem is lack of the

planned keystone department store. If such a unit can be brought in it would boom this center and its downtown. A difficulty in this center is its essentially strip layout forced by an awkward site. Almost all stores front one street. Two cross streets cut slash through the center. The strip parallels the established main street for about half its length. Already this has added impetus to a general movement of business and property values westward. The center is out of scale, too large for being easily assimilated into the rest of downtown but, of course, too small to wipe out the older section of downtown. Lack of cohesive promotion and a badly dissipated store by store opening spoiled the power of the center's opening. Parking is concentrated in a single two level ramp structure which is poorly laid out. Access to and parking within the ramp are arduous. The lumping of parking means that spaces are concentrated near a few stores rather than spread among them all.

The second downtown shopping center has 40 stores with an impressive department store as anchor. A key difficulty is that this center was sited just a trifle off from the shopping core of downtown--but still well within the CBD. Foot traffic can't easily shop the old main street and the new center. Bus service is weak to the center. The new complex was erected in a sort of grey area. So--new and shiny--it sits amid unsightly neighbors. A supermarket in the center was badly located. It is blocked off from the other stores. Its traffic magnetism then does not rub off on the rest of the center. The center has been aggressive in making itself the hub for community affairs. But this, at least to a degree, fights downtown. After about a year this center is doing well. The operator and tenants are confident.¹

A problem which arises from a CBD study is how much the existing establishments can do. It is like the controversy of the chicken and the egg. One has to find out the potential demand, assuming that the space will be available in a high quality atmosphere, and good environment with a substantial town around it. From this you can come up with some figures. The next problem or step is to try to indicate the extent to which the existing CBD establishments can do the job, how they can

1. Downtown Idea Exchange, Vol. 8, No. 20, October 15, 1961.

increase their sales, and how they can take on additional space. This is a living central business area in discussion, containing a great variety of major firms now in operation, many of which are up against a very tough situation. Some are desperate and ready to close business because of some adverse trend. The question is to what extent can they be rehabilitated and made to function in a revitalized downtown.

Some price tags, next, must be made to estimate the tax value of the new private improvements that would come into the CBD to meet the demand, to try and foresee the impact of CBD upon the tax payers, and also to estimate the public costs of improvements.

Some type of realistic assessment of the feasibility of specific projects should be developed. The costs to buy land for specific downtown purposes, to clear it, to make it available for private development are some questions which must be asked before implementation can take place.

From the viewpoint of economics downtown, it ought to be kept in mind that it is a unique place. It is unique in its land use pattern, variety of economic interrelationships, and activities that can not be duplicated anywhere else in the metropolitan area. In retailing, one can provide a depth and variety of merchandise that is not economically feasible to provide outside this area. A great many customers are needed to support the depth and variety that makes the CBD an attractive shopping district and it is generally the only place where enough shoppers can come together to conduct necessary

business and to do their complete shopping. The Metropolitan area that does not have a well functioning CBD is probably a sick metropolitan area. In this particular day with the mobile nature of population, and business and industry being what it is, the chances are that a metropolitan area with a sick downtown is likely to lose out on new types of enterprises which are normally CBD oriented.

There is a decided decentralization taking place in certain activities. These may be legitimate or inevitable decentralization. Downtown is becoming more and more specialized to carry on those activities which only it can do or which it can do best. It is getting away from many of the convenience-type functions. In retailing, foods and drugs and other convenience goods shops are setting up closer to the locations where the markets are. This is a legitimate type of decentralization.

A strengthening of the market for specialized downtown activities such as department stores is taking place. Assuming for a moment, that the CBD problems can be solved so that the downtown specialized operations can do their job, there is still likely to come a time when the major portion of all the new commercial space is located outside the CBD area. If you skim off only one-fourth of all this additional net that comes into a growing metropolitan area and properly place it downtown you would still have all the ingredients needed for a complete CBD revitalization. As a matter of fact the CBD's could not absorb any more of an economic triumph.

The economist, basically, sees downtown as physically obsolete. Downtown was built yesterday for yesterday and not today for today or tomorrow. A substantial amount of physical change must be made if the CBD is to satisfactorily perform its traditional functions and perhaps some of the new functions it will take on. The problems involved include acquiring new investments and demolishing some present investment; it means major projects, large capital outlays with public and private cooperation played in unison. This does not mean the bulldozer approach. Every CBD has a definite architectural character which should perhaps be preserved at least in part. This involves more of the design aspect than the economic aspect.

When the economist looks at the CBD, he sees it as a high cost area. Any new type of commercial development downtown has to be fairly massive in order to absorb the high cost of land. This is a major problem. In addition to the high cost of land there is the difficulty of land assembly for expansion of existing activities or the construction of new buildings. Desirable space is usually very tight--high cost tight space. That is the harsh fact.

The economist also sees today's CBD as a tremendously inefficient place because of deterioration and obsolescences of the structures. This is an area where one finds great numbers of square feet and large amounts of vacant establishment space. These buildings have been amortized many times. They are taxpayers, they are rent returners as far as the ground floor is concerned, but inefficiency is characteristic of the CBD. Many

of these buildings are half occupied. No matter how congested downtown looks from the streets, within the inside blocks there are literally acres of CBD land which are not used. It is vacant, it is in the backyard, it is simply not utilized at all. This contrasts with the modern shopping center where virtually every square foot is utilized.

From the viewpoint of the economist, the CBD is notwithstanding a place of tremendous potential. For the most part it is an untapped potential. Investments are made in outlying areas. In some cases, because it was the proper place for them to go; in other cases, it was because they could not be made downtown. The downtown had too many barriers for new investment.

Over a period of time another element of support for the downtown is the movement of housing back into the CBD area. Increasing numbers of people are demanding close-in residential accommodations, notably families without children, older people, and young married couples. There is and will be a demand for apartments which are close-in.

The economic study must take into account some basic changes that are taking place in economic development itself. Significant changes have and are taking place in manufacturing, in office operations, in retailing, and in merchandising. Things are happening internally in these major segments of our economy which are drastically changing the roles of the CBD. The typical manufacturing plant today demands outlying sites, one story buildings for efficient operation, plenty of parking space, and accessibility to major circulation patterns. The same trend can be seen in office space. There is a need and

demand for high-priced space, air-conditioned space with all of the amenities. The possibilities of providing the kind of space that is now demanded must be taken into account and the feasibility of providing that space downtown at a reasonable rate needs to be appraised.

A major change is taking place in the field of merchandising. Convenience-type stores are moving closer to the markets. Yesterday the size of a drug store was 6,000-10,000 square feet; today 16,000-18,000 square feet is the starting point. Supermarkets used to be 12,000 square feet but now are more than 20,000 square feet. This growth applies to most commercial establishments.

More and more the internal complexion of the stores, particularly the suburban shopping center stores, are taking on similar characteristics. The merchandise displayed in a food store, a drug store or a five and ten cent store are so similar you may have to ask a clerk to be certain of what type of store you are in. The food chains are moving across to non-food lines and doing so on a large scale. Some 20 percent of the sales of many of the major chains are non-food items. Drug stores are selling foods, toys, apparels, appliances, and they are also restaurants. Variety stores and junior department stores are carrying drugs and food. The effect is a trend back to the general store concept.

These new general stores that are going up in the suburbs are having a major impact on the shopping patterns of the country; they are having a real nibbling effect on the downtown

stores. The downtown department stores are not being affected half as much by outlying competition from other department stores as they are by other types of stores that are nickeling and diming them to death. More and more people are able to get more and more items which they used to buy in the department store from the dime store, the drug store and the food store.

Studies have shown that the average shopper in the shopping center is going to one and possibly two stores. She no longer goes to five or six as was true in the original shopping center. Today she goes into a 30,000 square foot supermarket and buys ten to fifteen different items that used to require stopping at three or four stores. If, while driving home, she remembers she missed something there are still plenty of stores on the highway at which she can stop.

The new giant stores are having a major effect upon outlying shopping centers. These in turn, have an effect on the CBD. Shopping centers built within the last two or three years are now almost obsolete in many highly competitive areas. They were probably obsolete the day they were built. In the next three or four years a sizeable number of medium-sized shopping centers may fail for this reason. They have reached such a size now that you are required to walk 1,200 feet along a mall in the hot sun, fight your way through thousands of cars to try to find your car in the parking lot. You may be in one store and wish to go to another one which is some 25 stores away. Women just simply will not walk this distance. This means that the impulse stores in between may suffer. Vacancies are being created in shopping centers when the small store just cannot make a go of

it. The supermarket may have a great deal of traffic but the other stores may have no one walking by their doors.

The trend is well under way toward larger units, all under one roof. This makes the economic analysis in the shopping center field rough today because we cannot think in terms of stores anymore. Today we have to think about how much will be spent for different kinds of items.

Again, this has a great bearing upon the downtown itself where there is exactly the same problem. A key to downtown as a retail location is specialization in depth and in variety. Perhaps specialization in higher-priced items of merchandise is one answer. The reason such merchandise can be offered downtown is the massive market potential. The branch department stores have helped somewhat with variety but they cannot carry the volume of the downtown store. A branch department store may have 20,000 to 30,000 square feet while the downtown department store is some 200,000 square feet. In some cases the department store owner is likely to believe he is down grading his name because his branch store cannot handle the equal volume of his downtown store. Some believe it is better to have a branch store as a defensive move against other stores. Some say they definitely will not go to the shopping centers, they will concentrate on doing a better job downtown.

. . . Today chain stores and financial institutions, in making commitments for long leases or mortgage loans, place confidence upon market surveys made by qualified analysts.

While the methods of market surveys used at the outset by leading analysts have thus in most instances proved to be sound and to yield accurate results, marked changes

have occurred in the overall environment in which these surveys were made in a number of vitally important elements.

. . . the market analysis must more than ever take into account the effect of the sales of the existing new centers upon any proposed development. A larger proportion of market surveys now will give negative reports and advise the developer either not to construct any center at all or else to reduce its size.

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Changes have been made in the kinds of merchandise handled by different types of stores. Variety stores are continually expanding their lines to include clothing; drug stores have become almost junior department stores in many instances. Some supermarkets are even adding clothing on a self service basis. Consequently, in estimating sales by type of store, allowance must be made for expansion in the lines of merchandise carried.

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Frequently the developer of the proposed shopping center already owns the site and he desires a market analysis to determine what kind of center, if any, can be built. In other cases, a department store owner or a developer asks the market analyst to examine all possible locations available and to recommend the one regarded as most suitable for the proposed center from the standpoint of population support, highway access and price of the land.

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The first promoters of centers sought vacant land either close to downtown areas, or on the edge of densely settled areas because store owners would not sign leases on vacant tracts farther out. Now however, the full logistics of the automobile age are realized. The express highway, the belt highway around cities, . . .

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A community center of 150,000 to 300,000 square feet of store area, with a junior department store and variety store as the largest units, on 20 to 30 acres of land, requires for its support a population of 80,000 to 100,000. However, caution is needed in recommending centers of this type if a large regional center is planned or in operation in the vicinity, for the smaller department store or the few apparel stores would often suffer in competition with a center having a large department store and a greater number and variety of apparel stores. These community

centers however, may be built in areas not large enough to support a regional center or in heavily populated areas where there is no regional center, . . .

After a preliminary decision as to the type of shopping center, the next step in the market analysis is determination of the size of the trade area. The extent of the trade area depends of course upon the type of center proposed. A regional center with a large department store will draw customers from an area that is bounded by a point equally distant in travel time from another regional center of the same size. There is no exact number of miles or travel time distance. . . .

The type of center which can be supported will be automatically determined at the outset if the land area is limited, as it would be impossible to construct a regional center on 10 or 15 acres with the huge parking areas required for today's shoppers coming by automobile. If there is another regional center a short distance away, it would not of course be possible to determine the size or type of center until after a market survey is completed.

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Having determined the extent of the trade area, the next step is to calculate the number of households in each community of the trade area as of the date of the survey. . . .

Consequently it is necessary to use other methods to determine the current number of households. The following methods or a combination of them may be employed:

1. The number of dwelling units built as shown by permits can be added to the number of occupied dwelling units shown in the U.S. Housing Census of 1950. . . (1960)

2. The utility companies--gas, electric, or water--will often furnish counts of residential electric, gas or water meters by district, which is equivalent to the number of households.

3. A count of houses in suburban areas can be made from current air photographs.

4. The U.S. Census has made special censuses of many rapidly growing communities.

5. Leading market analysts have tabulated data on the number of households for most of the metropolitan areas of the United States from the above sources and have such records in their files.

The next vitally important step is to ascertain average family income in each segment or community of the trade area as of the date of the survey. This can be done by the following methods:

1. The use of the average home value or monthly rental as a basis of estimating income. This may be obtained by consulting real estate firms, or by making inquiries as to sales prices of typical houses in different areas. . . .

2. Sample surveys, in which average incomes are obtained by personal interview.

Families spend a certain proportion of their income in each type of retail store, which is usually a uniform percentage for fashion goods for families in all income ranges. The sales of the retail stores in any area are of course not equivalent to retail purchases of the residents of the area, because some families in the area buy elsewhere, and some areas have regional shopping centers which attract customers from a wide area. . . .

The vital question now is--what percentage of these total purchases will be attracted to the given center?

It is of utmost importance to know, if possible, what major department store is going into the center. A Marshall Field, J. L. Hudson, Macy, Jordan Marsh, Sears Roebuck, Montgomery Ward or other well known department store will manifestly draw more customers from the immediate area and more from a greater distance than a lesser known store. Also the composition of the center is of great importance. A regional center with 12 to 15 women's and men's clothing stores will attract more than a center with only two or three such stores. A regional center with two major department stores and an array of national chain and local stores will draw a higher percentage of the total than a center with only one major store competing with another center also with one major store a few miles away.

Highway access via belt highways and expressways with local feeder roads, extends the trade area.

Distance from a competing center of the same type is an important factor in estimating the percentage of total purchases a given center will attract. It is assumed that a regional center will attract heavily from its immediate surroundings and from other areas easily accessible which have no shopping facilities, but very little from the neighborhood of another center with a similar group of stores.

The percentage to be attracted will thus decline with travel time distance from the center and with the proximity of a competing center. The percentage will drop in low income areas if the center is designed to serve middle or high income families.

A new regional shopping center however, can expect to draw from the trade area that has no comparable shopping facilities with ample free parking, regardless of the existence of old style shopping districts with inadequate parking facilities.

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It is a mistake to calculate the volume of the new center only on the basis of expected increased sales resulting from the expected increase of population. The stores must do business the day they open their doors and they must secure that business from people living there at the time. Shoppers are not chained to old shopping locations; they will come to a new center that can be reached conveniently, has ample free parking and a well diversified selection of merchandise. . . .

The sales volume for each type of store is derived by taking the estimated percentage of total purchases for each type of store for each area and adding them together. The total estimated sales of the center are thus ascertained. . . .

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. . . The department and apparel stores should occupy 70 percent or more of the total building area in a regional shopping center.

Supermarkets should not be placed next to department stores, as families buy food at a different time than they make clothing purchases, and trucks delivering food next to department stores are objectionable to the customers of the department store. Some supermarkets lately however, have been benefited by the opening of discount houses adjoining them.¹

Over the last ten years the trends have been decidedly against the downtown retailer. On the whole the CBD areas are hurting badly. Can you expect the downtown retailer to improve

1. "A Re-examination of the Shopping Center Market", Homer Hoyt, Urban Land Institute, Technical Bulletin 33, September, 1958.

his store, add air-conditioning and make the many changes that are necessary to help him increase his volume of sales? Downtown retailers cannot be expected to make such improvements unless they do it as a part of a concerted effort on the part of a number of retailers because of the tremendous costs involved. A conscious CBD study is a key to any economic reversal for this area and the city.

The economic study must precede any kind of successful physical plan. It should produce some fairly firm square footage figures as to the total amount of space that would be required for types of establishments downtown, if it were made available under optimum conditions. This information is needed by the physical design-planner so he knows how much space and what kind of space is needed.

The economic study will also indicate some of the improvements that will have to be made, together with estimates of additional space needed downtown, and how that space is used in terms of circulation, traffic and parking. The economist and designer have to work together at this point.

The economic study is basic to almost any specific projects that may be developed in the CBD. Unless downtown efforts result in specific projects of improvement nothing will really have been accomplished. Face lifting and minor improvements will not produce an economically sound base where it was absent. Unless there are some active projects to remove existing blighted areas and put in new magnets to pull people downtown and supplement what already is there, the CBD has little prospect of

competing with expanding outlying areas. The economic study helps establish the specific complement of economic activities that can profitably go into any particular project.

The economic study is basic to any kind of programming for improvement downtown as cited by Mr. Hoyt. To get down specifically to the proper coverage of an economic study, it must be based upon a metropolitan economy. It gets directly into the kind of economy to be anticipated ten years from now. One technique involves projecting employment from an analysis of the local industrial complex. From basic employment trends the population forecast, income figures and other data can be derived. Then the economic study pinpoints the types of land use changes which are to be expected if trends continue.

A detailed downtown space use inventory is an essential element of the economic study. It is important to find out exactly what is going on downtown and where it is happening. What are the square footages in these categories? Sales per square foot are different for all the various types of merchandise. These must be determined.

It is necessary to project space demands to get down to the real pay dirt of the economic study. What proportion of the total space demand can effectively be attracted to the downtown section, and why? Again this means looking at each type of space downtown and at the trends that are taking place in these types of space uses. This involves value judgment, and educated guesses, but it is still better than any formula that has ever been used. For example, assume we have 100,000 square feet of vacant office space. Because we have this

vacancy can we expect that additional needed square feet will be absorbed in existing space? On a mathematical basis we can say, yes. We have 100,000 square feet of vacant space and we are going to need 100,000 square feet of additional space. It is not going to work that way because existing vacancies are likely to be in walk-up buildings which are obsolescent or without air-conditioning. It becomes a judgment on how much existing space can be used, unless data is also available on conversion potentials.

After we have come up with these value judgments we must work along with the designer to finalize, as much as possible, the comprehensive plan for the study. Some price tags are placed on these projected downtown improvements. A tag must be put on the amount of investment which seems realistic, then a tag on the return the private investor can expect. Is the result then feasible or not?

"Economics of interaction" means that in any kind of a downtown program private investments and public investments must support each other. Public improvements should be handled in the beginning, as far as streets, utilities, and parking are concerned, to support the private investments and make them work.

The public building is one of the greatest tools for effecting downtown improvements, for bringing new private investment into the CBD. Cities have been duped into the idea that a public building can be put someplace out in the suburbs because of free land or lots of parking space. By putting a

public building in the CBD it can stimulate and support other downtown improvements.

These investments in public buildings in connection with downtown redevelopment can be an important factor. An example is the new Pittsburgh stadium. It cost \$10,000,000 dollars more to build it in the CBD but it is believed that the \$10,000,000 will be returned in improvements of property values in the immediate area and in new investments that are going to come into the area. The traffic will be handled so much better by a grid system and the expressway than the now grid-radial system. The slums will be cleared in this area to make room for related activities. The initial cost is more but it is a shot-in-the-arm for the CBD.

Large projects breed other activity. There is a need for the big project so that a real impact will occur on its surrounding area.

Another element involved here is "economics of marginal effectiveness". If a massive impact on the downtown is not made we may as well forget about any significant improvement program. A new department store, in order to work, must be large enough to carry the depth and variety that pulls people into it. If the size of the required department store is cut in half the business is cut not in half but more likely to one-fourth of its earlier potential.

A third basic economic factor is the "economics of aesthetics". It is aesthetic design that is going to give the CBD most of its value. When we talk CBD versus shopping centers

it means contrasting the CBD's obsolescent physical plant with the exciting, attractive, efficient, appealing, brand new facility of the shopping centers.

The central business district in its rebuilding program has to give thought to an aesthetically pleasing atmosphere. It has to eventuate into some project, into a series of inter-related exciting activities.

CHAPTER FIVE

DESIGN ANALYSIS

When Rockefeller Center was conceived it was probably thought by many that someone must be mad to waste all that valuable land by putting in a mall with flowers, a skating rink with flags and all the things that make the Center a thing of beauty. Needless to say, Rockefeller Center has been a success, it has a focal point, it has beauty. The ice skating rink does not pay for itself but the fringe benefits acquired from it more than compensate for this loss. What would it be without the skating rink?

The design-planner must work along with the economist so that it does not become an impossible task of one man to attempt to design when all or most all of the decisions that have been made are based on economics. A project as complicated as a CBD needs the cooperation and integration of the minds of many specialists. It must be remembered that the end product is

sales and a physical design scheme should be given the consideration to complement this factor.

From the beginning of his studies, the design-planner must be aware of the history of the city. He must acquaint himself with the total environment and mood of the city. He must recognize local values--what local people consider as important. He must consider the historical aspects of the city. Perhaps some old houses should be preserved, maybe not in the original setting if a conflict might result but nonetheless preserved in an appropriate part of the overall design scheme and to fit in a particular niche.

Those that advocate bigger and better downtowns say that a return to the center city for living accommodations is necessary.

Downtown advocates say:

Today it is the "fashion" to say that population is deserting the central city and heading for the green hills of suburbia. We challenge the long term correctness of that view. We even think that downtown population will grow substantially!

First, there is a greater rate of growth in the suburbs right now. No question about it. But we are not concerned with great rates of growth figured from small population bases which exaggerate the figures grotesquely. We are concerned with health growth of solid population boom in suburbville. It means less than we all may think.

Second, though there is a trend of population out from the central core of the few greatest cities there is no guarantee that it will continue. So far it is a short range trend and these fast flips are notoriously unstable. They can turn about quickly. Then there is no irrefutable evidence that these trends will spread to smaller cities down the line.

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Other factors destroying the charms of the suburbs are the lack of adequate services (schools, water, etc.), the destruction of the beauty of nature and its replacement by monotonous sprawl. As the suburbs continue to move out, the driving time increases to central city employment. The "friction" of long travel increases in dollar and irritation terms. Add to that the fact that already beleaguered bus and rail commuter services will find it even more difficult to service now, distant, low density residential areas. And so it goes.

What is the answer? We think cold economics as well as the desire for better living will force a large portion of the future population growth to live downtown and near downtown. There will be no alternative. The immediate job for downtown is to prepare now the housing, commercial facilities and amenities of life to serve the downtown population boom which is coming fast. This will be the challenge of urban revitalization.¹

New good housing is needed in downtown Ann Arbor to provide for the shift back to the center city. When cities began they began with housing and the other activities came as a matter of course. Many CBD's today suffer because there are no high income people living downtown. In this particular case it is housing for the aged that is so necessary rather than high income families. The senior citizens would like the convenience of easy access to the Central Business District and the University. Town houses for faculty of the University of Michigan, alumni housing and cooperative student housing could enhance and benefit the CBD.

Many of the people in the high income group have left the downtown area for the most part to become a part of the suburban areas. It may be more disturbing because of the trend of

1. Downtown Idea Exchange Editorial. "The Downtown Population Boom". Downtown Idea Exchange, Vol. 8, No. 2, January 15, 1961.

middle-income families moving to the outlying areas. Downtown living is become the exclusive province of the lower or lowest socio-economic groups.

As the high income families leave downtown it can affect the retailers because this high spending power migrates to the suburbs and may shop in the suburban shopping centers. Volume and high-mark-up luxury sales are lost. Property owners lose as business volume drops. The revenues from leases decreases. Blight may set in and cause further property value decline. Bankers lose as deposits decline, as the overall business activity declines and as investments depreciate. The employers have a more difficult time attracting executive and clerical workers. Professionals, such as doctors and lawyers, lose as their clientele move to the suburbs thereby causing many of the professionals to follow suit. Even realtors lose as they must buy, sell, rent and manage less desirable properties. The city suffers from loss of tax revenues while costs of fire and police protection and maintenance remain high or increase because of the new subdivisions. Public transit may lose when its routes no longer pick up suburbanites or do so only by longer, less profitable routings. Everybody loses either directly or indirectly as the quality of the CBD deteriorates.

Despite such trends there seems to be a desire to move back to the center city where one can walk to work and be in the center of all the activities offered by a revitalized CBD. To what extent this is a significant change and to what extent it is wishful thinking on the part of downtown investors is problematical.

An honest criticism can be made of many downtown thinkers. The criticism is that they are myopic--near-sighted--and do not see beyond the boundaries of the immediate core of downtown.

For many reasons that is a mistake. One of the most important reasons why it's an error is because it is just a few minutes walking or driving time beyond the city's downtown core that a great segment of the population dwells.

From purely commercial criteria this is most significant. These people living closest to downtown are the best prospects for downtown, as Reilly's famous law on retail gravitation shows. On non-commercial grounds we must recognize that for these close-in residential areas downtown tends to provide the vast bulk of social and cultural services.

It is wisdom on the part of downtowners to be vitally interested in the residential neighborhoods near downtown. Their rehabilitation or redevelopment is closely tied in with downtown's future.

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This points the way to a major opportunity to stabilize downtown neighborhoods, hold and increase population living close to downtown. Techniques of conservation as well as of demolition have a great deal to offer.¹

The suburbs, in many cases, do not offer what their occupants expected they would. The houses are jerrybuilt, roads are poor, shopping centers overcrowded, schools jammed and people are getting tired of the steady diet of do-it-yourself weekends.

Many suburbanites, especially those who originally came from an urban environment, might be enticed to live downtown once again if they were given half a chance. Plans, programs,

1. Downtown Idea Exchange Editorial, "Mid City Myopia" Downtown Idea Exchange, Vol. 9, No. 12, May 15, 1962.

and studies to make the CBD and its adjacent territory an attractive living environment should be given top priority for downtown reorganization.

This is not to say that many of the high-income people who might return to the central city would completely abandon the amenities of the suburbs. A new "status symbol" is the town house apartment. This is the residence that is used for week-day living, for entertainment of business associates and other uses more compatible to a town house residence than to the "country estate." Such combined city and country living is appealing to many people though it would be a mistake to assume that the numbers of such persons are proportionately large.

In New York City now, there are thousands of two-residence owners who reverse the traffic trend. On Friday afternoon, when so many are streaming out of New York City in horrible traffic jams, such people can saunter into New York City and listen to traffic tie-up reports on the radio or sit in their uptown apartment sipping cocktails and planning the week-end in the big city. This is another version of the two-residence group.

In planning for the rejuvenated CBD it is desirable to provide for this intermingling of many different types of activities. The design aspect, when used as a tool, must provide the planning for the people of the community and private developers. This then will aid the architect to the introduction of the overall visual design concept.

Visual design is so important in its delineation as to scale and proportion--the relationship in scale of people to

buildings, the scale of automobile to structures, open spaces, vistas and the identity of individual projects for its personal identity. Groups of existing buildings of varying architectural styles with new structures can work well together with a unity of design through a strong unifying element such as an open space. Unification and integration of all the elements into one overall design will help to identify the CBD.

CHAPTER SIX

TRAFFIC ANALYSIS

Traffic circulation and off-street parking problems are most acute in the Central Business District since it is the focal point of business, civic and retail activities.

Accelerated urbanization with lack of proper planning study to guide such growth has added to the problems of most cities. The problems resulting from population increases are compounded by shifts of population from non-urban areas to the city. Improved highway systems have reduced travel time thereby making it possible for people to live further from their place of employment, in turn, increasing the total traffic problem.

Despite large-scale highway improvements, highways in many of our urban areas are still inadequately sized to the need. Our urban thoroughfares make up only one-tenth of the total highway mileage, but they must carry one-half of all the highway traffic.

Terminal facilities are an integral part of the traffic problem. It is important for the motorist to park in close proximity to his destination. Improvement of off-street parking should be given prime consideration to help solve the parking situation for American cities. Central business districts where lack of parking is acute are at a serious disadvantage in competing with other commercial areas. On-street parking must be given less and less emphasis until all these spaces have been removed and the original intent of streets--to move traffic rather than store cars--has been achieved. The volume involved in traffic movement now requires the full capacity of many central city streets.

Many a retailer has looked at his diminishing receipts and decided that if only off-street parking were available for his customers all of his problems would be solved. His store is located in an old "established" shopping area where he has done a good business for years. He is within a comparatively few feet of an important transfer corner on main transportation lines. While his business continues to decline, the new modern shopping centers some distance away are prospering. If only there were off-street parking!

Because his livelihood may be at stake he had better check to see whether or not his wishful thinking is really dreaming. Shopping habits have changed to quite a degree. However, while the automobile has come into use more and more as the means of conveyance from the home to the store, an off-street parking space, on its own, will not bring a single customer to the merchant. Even in the new shopping centers, with their acres of free parking, it is not the parking which is the first attraction to the buyer. The shopper is interested in the merchandise, in the merchandising, in the price, in opportunity to make comparisons and in several factors which are placed before parking. . . . He or she learns of a new store which is bright and attractive, which is well lighted, where the values of the goods offered for sale are more attractive, where the clerks are pleasant, the service is good, . . .

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This report does not intend in any way to indicate that adequate parking is not a necessary adjunct of the retail business. Rather, it is believed that these case histories, selected from a number of experiences, emphasize what has previously been said. Parking is one of the factors necessary to the success of a retail business. However, it is only one factor and it is not by any means the most important factor. It is necessary to give attention to many things in order to maintain a retail shopping area in an attractive, healthy, prosperous condition. Before a property owner decides to invest in parking as a panacea, he would do well to keep in mind that "off-street parking will not save a dying shopping area".

Many operational techniques have been utilized by traffic engineers to improve the capacity of streets. They include one-way streets, coordinated inter-connected traffic signal systems, street widening and extensions, channelization by lane markings and sign and properly located loading and bus zones.

In developing a thoroughfare plan, an overall major highway and route system is needed. A coordinated master route plan must be a part of a guide to the logical and orderly development of the urban area. It is needed to provide for the safe and efficient movement of traffic in the future and to assure the logical and economical expenditure of public funds for traffic purposes. This plan must be developed with or as part of a comprehensive plan, taking in consideration land use, anticipated population, and anticipated growth of all elements pertaining to the normal growth of the city. This basic inter-relationship should be strongly stressed.

1. "Off-street Parking Will Not Save A Dying Shopping Area", John D. McGillis, Urban Land, News and Trends. . . in City Development Volume 17, No. 7, July-August, 1958. (Published by Urban Land Institute).

State and national governments have recognized the need for such a plan. Nationally, the Bureau of Public Roads has advocated renewed efforts to get urban area highway work under way with proper consideration given to all related community planning. The national inter-state expressway system is well under way in development and now stress is shifting to penetrator routes from the expressways into and through the cities themselves to continue the free flow of traffic in and out of cities. The Bureau stipulates that such plans must be in accordance with the local master plan. If such plans are not in existence, federal-aid inter-state plans must be in conformance with desirable future land-use patterns, residential and industrial development, social and recreational improvements, and other factors involved with the orderly development of the community as determined by higher authority.

The large expenditures and length of time required to put a comprehensive area-wide plan into effect necessitates that it be implemented by stage development. In addition to financing, the effective implementation of the recommended plan will require complete action on everyone's part. Traffic demands do not recognize lines of political jurisdiction. Active support and inter-governmental cooperation should be sought from legislatures, executive officials, organized civic groups and from the public in general.

Resistances must be anticipated, just as objections have always stood in the way of past change. When parking meters were first utilized, merchants and business men felt that they

would repel the parker. This has not proved to be the case. The prime concern of the shopper is the convenience of well-located parking space at economical prices.

When one-way streets developed it was believed they would have a detrimental effect because all drivers would not be able to window shop. But the one-way streets were able to carry 30 percent more traffic per land and the effects were readily apparent, such as increased capacity and fewer intersection conflicts. They are now generally accepted features for certain types of problem area.

(A major parking problem is a shortage of parking spaces in the proper place.) The solution to a parking problem involves an orderly retreat from on-street parking to off-street parking. Good routes of travel and ample terminal points are vital to the CBD. Parking facilities in remote locations, regardless of the space adequacy and minimum costs will not satisfy the motorist who enters the CBD; badly designed spaces in good locations will be little better.

The two basic categories in which parkers can be placed are short-time parkers, consisting of shoppers and people on business-work trips and all-day parkers, primarily the employers and employees of the establishments. With the short length of stay required for shopping and business trips, it becomes paramount that parking facilities be located close to major destinations. Parking rates or assessments must be in keeping with this type of demand.

If the CBD expands and increases in attractiveness, the acceptable walking distance of shoppers increases. Studies

have shown acceptability ranges from 250 feet for smaller cities to about 600 feet for the larger metropolitan areas. An overall average for walking distance is about 500 feet. Shoppers have an average parking time of only about 30 minutes in cities of 25,000 population or less. The average parking time in larger cities is about two hours.

Peak hours on trafficways usually occur in the morning from about 7:00 A.M. to 9:00 A.M. and from 4:00 P.M. to 6:00 P.M. in the afternoon. In the morning, the peak hour traffic consists mostly of the workers with the shoppers starting downtown about 9:30 A.M.

The peak parking demand usually occurs between noon and 2:00 P.M. Usually there is considerable in and out activity around parking facilities during the day with, the inbound and outbound movement intensity coinciding with the overall traffic pattern.

To satisfy present and future parking needs a comprehensive program should be developed that will provide sufficient parking spaces to overcome existing deficiencies and keep pace with future parking demands.

The development of additional off-street parking facilities can be undertaken by private investment, by municipal investment or by a combination of both. The new facilities should provide adequate capacity to serve the parking needs, they should be properly located with respect to the principal generators, and there should be a reasonable guarantee of permanency. In other cities the development of terminal parking facilities have been, first of all, the responsibility of private enterprise.

But in Ann Arbor conditions dictate an exclusively public approach. But, there are three levels of participation where city governments can assist in the development of parking facilities. The city may offer technical assistance, including the development of a comprehensive parking plan to use as a guide for development. Land acquisition is one of the major problems encountered by both private enterprise and municipalities in such projects. The cities are in the better situation to deal with land assembly through their powers of condemnation or, if appropriate, through the use of urban renewal. Too often, as was found in Ann Arbor, when assembling a large parcel of land a great number of different types of ownerships complicate the assemblage. Condemnation procedures simplify the legal aspects of acquisition. Another level of participation is direct land acquisition, construction and financing by the city. The use of general obligation and revenue bonds can be utilized for financing such a project, or a special benefit district procedure might be used for financing.

CHAPTER SEVEN

ANN ARBOR'S ECONOMIC OUTLOOK

"Downtown Ann Arbor" and the "Ann Arbor Central Business District" are synonymous. The term embraces all three of the central districts--Main Street, State Street and South University. The uniqueness of this tri-partite central configuration has been noted in our conceptual analysis elsewhere.

According to the detailed field inventory undertaken in 1961, there are (or were) approximately 1,075,000 square feet of retail store space in Downtown Ann Arbor. Retailing is the primary function of the central business district. The future of the downtown depends very largely upon the area's ability to substantially strengthen central retailing in face of aggressive new competition.

Nearly 80 percent of all downtown retail space is occupied by shoppers' goods stores. Sales by shoppers' goods stores in Downtown Ann Arbor were an estimated \$33,800,000 in 1960--a key figure in this analysis. On a sales-per-square-foot basis, the downtown performance was not impressive but this is due primarily to two factors 1) the substantial amount of furniture square footage in the central area, producing relatively low sales per square foot; and 2) the apparent utilization of excess square footage by downtown stores simply because it is available. The latter point is important--in a new high-rent shopping center, the same entrepreneur would use less space to handle the same merchandise.

The following table shows the 1961 square footage and the estimated 1960 sales of retail stores in Downtown Ann Arbor, broken down by shoppers goods and convenience goods categories. An understanding of the distinction between these two types of retail stores is important: those offering convenience goods and those offering shoppers' goods. Convenience goods are groceries, drugs, hardware and gasoline while shoppers' goods include apparel, jewelry, furniture and other household needs. Neighborhood and community business centers tend to be dominated

by convenience goods stores. Regional shopping centers and central business districts tend to offer both types of stores, although the larger CBD's tend to offer both types of stores or both types of activities within the same store.

Table 1. Retail store space and 1960 sales, Ann Arbor Central Business District.¹

	Shoppers Goods Stores	: : :	Convenience Goods Stores	: : :	All Retail Stores
Gross square footage ¹					
Main Street	571,000 ²		158,000		729,000
State Street	207,000		76,000		283,000
South University	46,000		17,000		63,000
Total	824,000		251,000		1,075,000
Estimated 1960 sales	\$33,800,000		\$12,800,000		\$46,600,000

¹As of fall of 1961.

²Including one-half of hardware-farm stores.

In 1961, the sales of retail stores in Downtown Ann Arbor accounted for slightly more than one-third of all retail store sales in Washtenaw County. In shoppers' goods store sales, the downtown was the predominant center for the county market. It accounted for more than half of the sales of such stores in that year. Downtown convenience goods stores had only a small share of the county's total with more than four-fifths of over-all sales being made in outlying store units.

1. Source of matter from Philip Hammer, Economic Consultant, Washington, D.C.

The following table shows the estimated distribution of retail store sales in Washtenaw County in 1960 as between Downtown Ann Arbor and the rest of the county. This breakdown was based upon detailed field inventories of the major points of retailing in the county and is regarded as substantially accurate.

Table 2. Retail store sales in Washtenaw County, 1960.

	Shoppers : Goods : Stores : (000) :	Convenience : Goods : Stores : (000) :	All Retail Stores : (000)
City of Ann Arbor			
Central business district	\$33.8	\$12.8	\$46.6
Rest of city	4.0	25.9	29.9
Sub-total	(\$37.8)	(\$38.7)	(\$76.5)
Rest of Washtenaw County			
City of Ypsilanti	\$11.4	\$13.9	\$25.3
Rest of county	10.8	18.4	29.2
Sub-total	(\$22.2)	(\$32.3)	(\$54.5)
County total	\$60.0	\$71.0	\$31.0
Ann Arbor CBD as percent of county	56.3%	18.0%	35.5%

There are two key figures in the above table: 1) total sales of county shoppers' goods stores of \$60,000,000, and 2) the downtown's 56.3 percent share of all shoppers goods stores sales in the county. The predominance of Downtown Ann Arbor in the shoppers' goods field in 1960 is apparent. It is recognized that since 1960 a substantial amount of new competition in this class of sales has developed outside the downtown area. The effect of this competition and additional competitive pressures

that will develop in the future is indeed the main point of this analysis.

Detailed estimates have been made of the total expenditures by Washtenaw County residents for store-type merchandise in 1960. The purpose of this particular investigation is twofold: 1) to determine the extent to which local stores (particularly downtown stores) are meeting existing market demands, and 2) to provide a basis for estimating future increments of expenditures which will generate new demands in the future. In arriving at these estimates, full account was taken of institutional as well as personal expenditures in local retail establishments and of sharply different spending patterns in the student and non-student population.

The population of Washtenaw County as of April 1, 1960, was 172,400. It was estimated by Mr. Hammer, economic consultant for the Ann Arbor study, that total personal income in the county in 1960 was approximately \$350,000,000. This is an estimate of personal income before taxes. Mr. Hammer further estimated that total consumer expenditures by county residents for store-type merchandise in 1960 was about \$140,500,000. The latter figure, a key one in this analysis, excludes expenditures for automobiles, automotive supplies and repairs, farm supply, spectator sports and all other consumer items not ordinarily purchased in stores. It also excludes all expenditures for retail services.

Comparing local store-type expenditures and the actual sales of local stores in 1960 shows a "deficit" of local

(county) store sales of approximately \$9,500,000. Speaking generally, this might be regarded as the "outflow" of local store-type expenditures to stores outside of Washtenaw County. This primarily means an "outflow" of local expenditures to the large retail units in Detroit and to mail-order houses elsewhere. (Actually, the "outflow" was probably somewhat greater than indicated. Mr. Hammer continues that the figure for local store sales was inflated by sales to non-residents and, if these non-residents sales were subtracted, the gap between local store sales and local consumer expenditures was probably as high as \$12,000,000 or \$13,000,000 in 1960.)

The following table compares local expenditures and local store sales by types of stores in 1960.

Table 3. Consumer expenditures and retail store sales, Washtenaw County, 1960.

	Shoppers' Goods Stores (000)	Convenience: Goods Stores (000)	All Retail Stores (000)
Expenditures by county residents for store-type merchandise	\$68.2	\$72.3	\$140.5
Sales of local stores	<u>60.0</u>	<u>71.0</u>	<u>131.0</u>
Excess of expenditures over sales	\$ 8.2	\$ 1.3	\$ 9.5

As shown above, sales and expenditures in the convenience goods market were fairly close in balance as might be expected. There were some slight spillovers of expenditures into the Detroit area, probably absorbed by shopping centers between the

cities Ypsilanti and Detroit. Ypsilanti is some five miles east of Ann Arbor in Washtenaw County. The key figure in Table 3 is the excess of expenditures over sales in the shoppers' goods market. There was an "outflow" of shoppers' goods dollars of at least \$8,200,000 or about 12 percent of such expenditures in 1960. If local store sales were adjusted downward to eliminate sales to non-residents, this "outflow" may have approximated as much as \$10,000,000.

It should be noted here that the "outflow" of shoppers' goods dollars from Washtenaw County is about what might be expected in a satellite community adjacent to a large metropolitan area. Although a substantial block of retail establishments has developed in the county proper, the draw of the big Detroit stores is bound to be fairly heavy. Actually, the "outflow" of shoppers' goods dollars is much greater in rural counties that are far distant from large metropolitan centers than those counties close to a metropolitan center. In these more isolated rural areas the local population is not large enough to support major retail installations in the shoppers' goods field and virtually all shoppers' goods expenditures are made outside the area (largely to mail-order houses, but also directly to large metropolitan stores).

A further analysis has been made of expenditures and store sales for sub-areas within Washtenaw County. This analysis is not tremendously important in its implications, but it does give some additional insight into the local role of Downtown Ann Arbor.

For this analysis, Washtenaw County has been broken down into three sub-areas: 1) the Ann Arbor core area which includes Ann Arbor, Pittsfield, Scio and Lodi townships; 2) the Ypsilanti-East Tier area which includes Ypsilanti, Salem, Superior and Augusta townships and 3) the rest of the county. The cities of Ann Arbor and Ypsilanti are included within their respective townships, of course. The figures show that in 1960 about \$7,000,000 more sales were made by retail stores in the Ann Arbor core area than was represented by consumer expenditures of residents within the area, indicating a strong flow of dollars into Ann Arbor and its central business district from other locations. In the other two sub-areas, however, expenditures were greater than store sales and there was an "outflow" from each.

The following table shows the excess or deficit of local store sales as against resident expenditures for each of the sub-areas in 1960.

Table 4. Excess or deficit of local store sales as against consumer expenditures by sub-areas, Washtenaw County, 1960. (000)

	Shoppers' : Goods : Stores :	Convenience : Goods : Stores :	All : Retail : Stores :
Ann Arbor Core Area	+ 2.2	+\$4.3	+\$ 7.0
Ypsilanti-East Tier	- 7.1	- 5.9	- 133.0
Rest of County	- 3.3	- .2	- 3.5
County as whole	-\$8.2	-\$1.3	-\$ 9.5

Caution should be used in interpreting these figures.

Although the Ann Arbor core area showed an excess of store sales over expenditures, it is obvious from observation that local residents spend a substantial share of their money outside their sub-area and outside Washtenaw County altogether. The "outflow" of their expenditures, however, was more than offset by an "inflow" of dollars from other parts of Washtenaw County. The main point to make here was made earlier in Table 2--that Ann Arbor (particularly its central business district) is the main retail center of the county and draws in dollars from the entire market.

The above figures set the framework for the "present", that is, for the base year 1960. About 12 percent of Washtenaw County's shoppers' goods dollars were flowing out of the area in that year; Downtown Ann Arbor stores accounted for about 56.3 percent of all shoppers' goods store sales within the county; and competition for downtown shoppers goods was relatively scattered and not too strong.

In anticipating future prospects for Downtown Ann Arbor, the first step is to evaluate the anticipated growth in the Washtenaw County market. The year 1965 is used as the primary target year for this analysis, and it is estimated that Washtenaw's County population in that year will reach about 193,000 people or about a 10 percent increase from the 1960 population. The greatest gains are anticipated to come in the Ann Arbor core area due in large part to projected gains in the student body of the University of Michigan. The overall estimate for

the county as a whole for 1965 is based upon projections of the Washtenaw County Planning Commission and the Detroit Metropolitan Area Regional Planning Commission.

The following table sets forth population projections for Washtenaw County to 1965, breaking down the figure by the three major sub-areas and comparing the 1965 estimate with actual population in 1950 and 1960.

Table 5. Population trends by sub-areas, Washtenaw County, 1950-60-65.

	1950	:	1960	:	1965	:	Increase, 60-65
		:		:		:	Number : Percent
Ann Arbor Core Area	62,300		82,800		95,000		12,200 14.7%
Ypsilanti-East Pier	44,400		56,300		62,500		6,200 11.0%
Rest of County	27,900		33,300		35,500		2,200 6.6%
County Total	134,600		172,400		193,000		20,600 11.9%

Detailed calculations indicate that total personal incomes before taxes in Washtenaw County will reach approximately \$390,000,000 in 1965. Total consumer expenditures by Washtenaw County residents for store-type items will reach \$155,700,000. The latter figure is used in this analysis. It means that between 1960 and 1965, annual expenditures by county residents for store-type merchandise will increase by approximately \$15,200,000, which represents an additional potential market for local stores.

The projected gain in consumer expenditures for Washtenaw County is shown in the following table.

Table 6. Projected gains in consumer expenditures,
Washtenaw County, 1960-65.

	Shoppers : Goods : Stores : (000) :	Convenience : Goods : Stores : (000) :	All : Retail : Stores : (000) :
Expenditures by county residents for store-type merchandise:			
1965	\$75.7	\$80.0	\$155.7
1960	<u>68.2</u>	<u>72.3</u>	<u>140.5</u>
Increase	\$ 7.5	\$ 7.7	\$ 15.2

As this table shows, annual expenditures for shoppers' goods items by county residents will be about \$7,500,000 greater in 1965 than in 1960. This would represent new and additional sales by local shoppers' goods stores. The prospects of tapping this additional market would be regarded as a major argument for expending downtown store facilities.

Over and against this increased expenditure, however, it is necessary to set a realistic figure for anticipated competition. Washtenaw County is in the process of adding tremendous new square footages in shoppers' goods stores which will compete directly with Downtown Ann Arbor stores. On the basis of accurate figures on new developments already in operation and projected figures for new shopping centers that will definitely be built, it is estimated that between 450,000 and 500,000 square feet of new shoppers' goods store space will be built in Washtenaw County between 1960 and 1965, and much of it is already in operation or under construction. This new square footage

includes facilities in Arborland, Pittsfield Plaza, Maple Village, Westgate, Gault Village, and Gilbert Park.

It is reasonable and conservative to anticipate that this new competitive square footage can easily generate between \$20,000,000 and \$22,000,000 in new shoppers' goods store sales by 1965. Clearly, the impact upon existing stores in both Downtown Ann Arbor and other major retail centers will be tremendous. Potential sales of completely new store units will represent the equivalent of about one-third of total shoppers' goods stores sales in 1960.

The key question in this analysis, therefore, is how Downtown Ann Arbor might be expected to meet this unmistakable competition. There is no question about the new stores being built; there is also no question that the sales estimates set forth above for these new stores are conservative.

Under the most pessimistic set of assumptions, it might be assumed that the new competitive stores would have sales of \$22,000,000 in 1965 and that the "outflow" of consumer expenditures to stores elsewhere would remain at 12 percent (which would be approximately \$2,100,000). This would mean that there would be only \$44,500,000 of sales in 1965 by stores which were in existence in 1960, a loss for "existing" stores of about \$15,400,000. If this loss were absorbed by Downtown Ann Arbor and the remaining facilities in the same proportion as their relative shares of sales in 1960, it would mean that Downtown Ann Arbor's sales of shoppers' goods stores would drop from \$33,800,000 in 1960 to \$25,200,000 in 1965, a loss of \$8,600,000 or about one-fourth.

These pessimistic assumptions for 1965 are shown below.

Total consumer expenditures		\$75.7
Less new competition	\$22.0	
"outflow" at 12%	<u>9.1</u>	<u>31.1</u>
		\$44.6
Available to existing (1960) stores		
Ann Arbor CBD		\$25.2
Rest of county stores		<u>19.4</u>
		\$44.6

This is a pretty bleak picture. It is not likely that these pessimistic assumptions would hold, but they are set forth with some realism to indicate one end of the scale of possibilities.

The most optimistic set of assumptions would assume that the shoppers' goods stores of Downtown Ann Arbor, in face of new competition both inside and outside the county, would maintain their same relative share of local store sales in 1965, that is, about 56.3 percent of the sales. Assuming a 12 percent "outflow" of expenditures in 1965 (about \$9,100,000) local store sales in that year would be \$66,600,000. With its 1960 share of these expenditures, downtown stores would have 1965 sales of \$37,500,000, an increase over 1960 of \$3,700,000.

In order to maintain this share, however, Downtown Ann Arbor stores would have to force their internal competition (both existing and new) to very low levels. There would be only \$29,100,000 available for competitive stores against the normal expectation of \$48,200,000 for these stores, \$22,000,000 for the new units and \$26,200,000 for existing stores (their 1960

level). These competitive units would have to take a decline of nearly 40 percent in their normal anticipations.

This optimistic set of premises for 1965 might be summarized as follows:

Total consumer expenditures		\$75.7
Less: new competition	\$13.3	
"existing" competition	15.0	
"outflow" at 12%	<u>9.1</u>	<u>38.2</u>
Ann Arbor CBD (at same percent of total sales as in 1960)		\$37.5

It is clear that this set of assumptions is hardly realistic even under optimum conditions. If Downtown stores were all new and if the Downtown physical environment were completely re-designed and rebuilt, the assumptions might have some possible validity as a goal. However, these conditions are not possible.

A realistic approximation of what Downtown Ann Arbor might shoot for in the way of shoppers' goods sales probably lies somewhere between these two extremes. To reach this middle-level goal, however, major improvements would have to be made in downtown retail capacity. It should be kept in mind that there are other potentially negative factors aside from those already mentioned. One is the real possibility that Sears might build a new outlying store and further increase the volume of direct competition. Another is the prospect that the "outflow" of expenditures might even be stepped up under the impact of new development such as the projected Westland shopping center that will be built around a major Hudson's store on the west side of Metropolitan Detroit in 1964. The development of first-class,

new suburban facilities within Washtenaw County itself (including Montgomery Wards and possibly Sears) might serve to arrest the "outflow"; the Westland type of development would serve to stimulate it; in all instances the pull would be away from Downtown Ann Arbor.

The most realistic approach in setting a practical sales goal for downtown stores would be to calculate the maximum effect that the downtown improvement effort might have on competition. It might be assumed, first, that downtown store improvement plus the increased strength of other retail units within Washtenaw County (particularly the new stores in the new shopping center), might sharply cut back the "outflow" of expenditures to other areas. This will admittedly be difficult in face of new outside competition such as Westland, but it is a realistic possibility. Assume that this "outflow" can be cut in half on a percentage basis--from 12 percent to 6 percent, or a 1965 "outflow" of \$4,500,000 to recoup some of this "outflow".

It can next be realistically assumed that the anticipated sales of new local competition can be cut back by 20 percent by virtue of greatly strengthened downtown activities. This might be regarded as the "outside" expectation. It is not likely that new store sales can be cut back any more. This would mean a drop from an anticipated \$22,000,000 in sales to about \$17,600,000. It might also be assumed that sales of other local competition, "existing" rather than new, can also be reduced by 20 percent over 1960 levels. This is a reasonable if somewhat cold-blooded possibility.

Under these assumptions, the combined figure for "outflow" and competitive store sales in 1965 would be \$43,100,000. Subtracting this amount from the figure on projected consumer expenditures within the market area (\$75,700,000) would give an indicated sales goal of \$32,600,000 for Downtown Ann Arbor shoppers' goods stores in 1965, only slightly lower than the actual figure in 1960. This figure represents about the maximum that can be hoped for, and it will take a mighty effort to approximate it.

The difference in profit or loss, improvement versus status quo, would be difficult to justify to the individual merchant. If the completed project cost some "X" number of dollars could the merchants economically carry their share of this burden. Just how the plan will be justified economically is one of the major problems facing the entrepreneurs.

These projected figures--with a sales goal of \$32,600,000 for Downtown Ann Arbor--are summarized in the following table.

Table 7. Projected sales goals of shoppers' goods stores
Ann Arbor Central Business District, 1965 (000)

Total consumer expenditures	\$75.7
Goals for central business district	<u>32.6</u> \$43.1
Remaining retail operations:	
Other "existing" stores (down 20 percent from 1960)	\$21.0
New competition (down 20 percent from estimates)	17.6
"Outflow" to other areas (at one-half the rate as in 1960)	<u>4.5</u> \$43.1

To achieve the indicated sales goal for shoppers' goods stores in Downtown Ann Arbor will take a massive program of downtown improvement and revitalization. The first and most important essential will be a hard core of new retail facilities, including a major department store unit. New supporting shops must also be provided in a new physical environment capable of competing with the best of shopping centers. Traffic and parking problems must be solved. Major new customer-generating magnets must be added within the central area, including new office buildings, apartment houses, and motels. Either Sears must be stimulated to build the new central department store or it must be somehow persuaded not to build a competing new store outside the central business district. A new outlying Sears store would make the indicated goal for downtown retailing unattainable in 1965 when coupled with other new competition that will be seeking the Washtenaw market.

On the favorable side is the strong anchor provided by the University of Michigan and the heavy complement of existing supporting facilities in the downtown area--offices, government buildings, close-in housing and existing stores and shops. Also on the favorable side is the heavy concentration of new consumer expenditures in the Ann Arbor core area that is most efficiently served by the central business district. This latter fact is pointed up by the following table breaking down the distribution of the projected gain in consumer expenditures for store-type merchandise within the county by 1965.

Table 8. Projected 1960-65 increase in consumer expenditures, Washtenaw County.

	Shoppers' Goods Stores (000)	Convenience: Goods Stores (000)	All Retail Stores (000)
Expenditures by county residents for store-type merchandise:			
Ann Arbor core area	\$4.9	\$4.7	\$ 9.6
Ypsilanti-East Tier	2.2	2.6	4.8
Rest of county	<u>.4</u>	<u>.4</u>	<u>.8</u>
County as whole	\$7.5	\$7.7	\$15.2

On the negative side, of course, is the competitive advantage that new stores enjoy in their modern facilities and new environments. Although most of Washtenaw County's population will be in the Ann Arbor core area in 1965, the county's "center of gravity" is shifting to the east. New shopping centers between Ann Arbor and Ypsilanti will be served by high-speed traffic arteries. Access will be good to Westland and other major new retail developments projected within the Detroit area to the east.

The next question is what might be the impact of necessary improvements on Downtown Ann Arbor upon the existing stores in the central area? It is clear, first, that a sizable complement of brand-new facilities will be necessary at central locations. They may be operated by existing entrepreneurs or by new firms from the outside, but they must be new facilities in new or substantially new environments. They must be capable of producing greater sales per square foot than in the past in order to cover the costs of new facilities. With a ceiling on overall

sales, therefore, these new central facilities with greater productivity are bound to further reduce the volume now produced in existing downtown facilities.

In 1961 there were approximately 745,000 square feet of shoppers' goods store space in Downtown Ann Arbor (excluding hardware store space because of this high proportional amount of facility). Mr. Hammer anticipates that approximately 140,000 square feet of new facilities must be built downtown, including a 90,000-square foot department store and 50,000 square feet of new supporting space for shoppers' goods sales. These new facilities should be capable of producing sales of \$7,000,000 to \$8,000,000, which would leave approximately \$25,000,000 for "existing" stores. It is reasonable to anticipate that the difference of results obtained by observation could be produced in only 550,000 or 600,000 square feet of space. This means that a considerable amount of existing space would have to be converted or replaced either through a shift of operation from old to new facilities or through a liquidation of marginal operators in the downtown area. It also would mean, of course, that certain obsolete and unused retail facilities would have to be taken down and replaced by other uses if they are not to remain vacant.

It might be said in general that there is every indication that the retail characteristics of the three central districts, Main Street, State Street and South University, would remain physically the same without much retail in 1965. This is to say that State Street would still be heavily oriented to

specialty shops and fashion stores related to the University of Michigan, with little shoppers' goods activity at South University and major concentration of community-wide shopping in or adjacent to Main Street.

Additional convenience goods store facilities in the central area are also needed as a part of a strong new retail complex. In 1961, there were approximately 251,000 square feet of convenience goods stores in Downtown Ann Arbor. Sales of these stores in 1960 were approximately \$13,000,000, which represents what might be considered a basic minimum for the central residential and business market. If new apartment houses, motels, and office buildings are added, which must definitely be anticipated as a part of the downtown improvement program, there is no reason why sales of downtown convenience goods stores could not be increased to about \$15,000,000 in 1965, assuming new first-class facilities in the area. There is no reason to expect that new, competitive facilities in outlying areas would have any further negative effect upon downtown convenience goods store sales.

A minimum of 30,000 square feet, according to Mr. Hammer's calculations, of new convenience goods facilities will be necessary in Downtown Ann Arbor as a part of the new retail complex. These facilities would be capable of about \$2,500,000 in sales, leaving approximately \$12,500,000 for existing facilities. This latter figure could support about 200,000 square feet of space. There would therefore be a loss of about 50,000 square feet of existing space, and this might be accomplished by a

shift of operations from obsolete to new facilities as a part of the development program.

The point should be emphasized that the retail future of the downtown area is grim unless major physical improvements are made. The introduction of other supporting facilities by itself will not shore up downtown retailing. It will take some massive private and public efforts to revitalize the central core and put it in a competitive position in the years ahead.

Prospects for Non-retail Activities

In 1961 there were approximately 761,000 square feet of office space in Downtown Ann Arbor, more than one-third of which was occupied by Government. The great bulk of downtown office space is in the Main Street area, with modest amounts on State Street and virtually none in the South University district.

The following table shows the distribution of office space by business and government occupancy in the three districts of Downtown Ann Arbor.

Table 9. Distribution of office space, Ann Arbor Central Business District, 1961. (000)

	Main Street	: State : Street	: South : University	: Total : CBD
Number of square feet:				
Business	415.9	77.3	1.6	494.8
Governmental	<u>241.9</u>	<u>23.8</u>	<u>.3</u>	<u>266.0</u>
	657.8	101.1	1.9	760.8
Number of establishments	254	82	3	339
Total office employment	1,977	377	14	2,368

Detailed analyses have been made of the future office potential for all different types of occupancy. Excluding governmental office space it is estimated that additional private demand for office space in the central area will be for between 80,000 and 90,000 square feet of space by 1965. However, this would not be the effective demand for additional new space in Downtown Ann Arbor. It can be anticipated that some decentralization of this space might take place in spite of what is done downtown (in addition to "legitimate" decentralization that has been calculated separately). Further, it is anticipated that some of this additional demand will be accommodated in existing vacancies in downtown buildings and that there will be some improvement in older structures that will create new competitive space in the central area.

To be conservative, the overall estimate of private demand was scaled back by one-third to give a net figure of 60,000 square feet for new private demand for general-occupancy office space in Downtown Ann Arbor by 1965. It should be emphasized that much of this demand would be for first-class space which would be capable of supporting the costs of new building construction and operation through adequate rentals. In addition, it was recognized that there might be demands for specialized research offices in the central area, but there was no way to anticipate the dimensions of this demand. It might be assumed that research offices might need an additional 60,000 square feet at some point in the future and plans should be made to accommodate it, but no firm anticipations are possible in this category.

The projected expansion of government offices has been excluded from these figures. There is every indication that the 60,000-square foot figure, excluding government, used as new 1965 demand (net) is a conservative one and might easily be exceeded. Again, however, a great deal depends upon improvements in downtown environment factors such as parking and traffic that would encourage new investments in new office buildings.

It would appear that motel space in the area is lacking both as to total number and as to size of individual units. In Durham and Orange counties, North Carolina, the sites of Duke University and the University of North Carolina, there are more than 800 motel and hotel rooms. The combined enrollment of these two universities is considerably less than that of the University of Michigan, and the combined population of the two counties is considerably less than that of Washtenaw. Moreover, individual motel units are considerably larger which makes possible meetings and conferences that cannot be accommodated in a series of scattered small units. At the present time, there are 271 motel units in Ann Arbor. Three additional motels are being built with a total of 250 rooms. Comparisons of Ann Arbor with other university and manufacturing centers show a similar picture. These university-center types of local economies can support major complements of accommodations.

If all of the proposed new motels were built in Ann Arbor, there would be about 650 hotel and motel rooms in Washtenaw County. This would appear to be at least 150 to 200 units short of what might be supported. A strong case can be made that the new motel facilities should be located in Downtown Ann Arbor to

provide central accommodations and meeting places tied into university and business activities. A single motel at 150 units could be strategically located between Main and State streets, or two facilities at 75 units each might be built in close proximity to each other. Proximity to University Hospital which is a major generator of demand for overnight accommodations would also be a major reason for the central location.

There are also strong indications that Downtown Ann Arbor can support and generate demand for a substantial increase in rental housing units. Between 1950 and 1960, there was an increase of approximately 4,200 rental units in the City of Ann Arbor. Mr. Hammer anticipates that the number of rental units will further increase between 1960 and 1970 by an additional 4,500. Although the great bulk of this increase will undoubtedly take place in outlying areas in garden-type apartment units and some will be accounted for by conversions of owner-occupied to renter-occupied facilities, there will be a strong demand for new multi-family units at strategic locations with respect to the university, the hospital and the business centers of Ann Arbor.

It is not unreasonable to expect that at least 15 percent of the additional renter units can be located in or near the central core of Ann Arbor. In other words, it can be anticipated that 600 new apartment units might be built in Census tract 1 by 1970, which would approximately double the number of rental units in this central area in 1960 (659). This central tract, since it is contiguous to the University, accounted for

nearly seven percent of all renter units in Ann Arbor in 1960, and the addition of 600 units would give it about nine percent of the total in 1970, a reasonable assumption.

Plans should be based on approximately 250 of the 600 units being built by 1965. The new units would accommodate under-graduate and graduate students, university faculty members, and a growing number of couples who are childless or whose children have moved away from the family unit.

One other important demand element should be recognized here. This is the demand for miscellaneous retail service facilities that should be built in connection with new retail sales units in the central area. At the present time, there are approximately 155,000 square feet of service facilities, (motor vehicles, gasoline stations, and personal service) in Downtown Ann Arbor. New retail stores would generate the need for a variety of supporting service operations, many of which might shift from existing locations to new locations under redevelopment. A reasonable expectation might be 15,000 square feet of new service facilities produced in this manner, equivalent to about 10 percent of the 1961 square footage in the downtown area.

Downtown Space Demands: A Recapitulation

Based on the above calculations, it is possible to make a rough approximation of the new building and land requirements in Downtown Ann Arbor by 1965. Of necessity, these estimates

are tentative and approximate but they might serve as a basis for preliminary planning purposes.

A comprehensive development program could support approximately 590,000 square feet of new downtown space for retail sales and service, offices, motels, and housing. These new facilities would require about 1,800 parking spaces, and it might be assumed that one-third of these spaces, or 600 might be made available from existing facilities. This would mean the provision of an additional 1,200 parking spaces to support the indicated facilities. About one-third of these additional spaces might be accommodated in parking structures and the remainder in open lots. The new parking ramps would therefore require at least 120,000 square feet of building space, bringing the total building requirements to 710,000 square feet.

The ground coverage of these parking structures would be about 310,000 square feet, assuming different heights for different kinds of buildings and excluding necessary land for setbacks and landscaping. If this additional land is included and if open parking lots are also added, the development would take a total of about 600,000 square feet of downtown land.

These figures are summarized in the following table:

Table 10. Preliminary projections of new building and land requirements, Downtown Ann Arbor, 1960-65.

Type of Facility	:Building Size: :(square feet):	Ground Coverage: (square feet)	:Approximate :Building cost
Retail sales	170,000	120,000	\$2,700,000
Retail services	15,000	10,000	180,000
Office	60,000	25,000	1,000,000
Motel	125,000	65,000	1,300,000
Housing	220,000	50,000	2,000,000
Parking ramps	120,000	40,000	520,000
Totals	710,000	310,000	\$7,700,000
Landscaping, etc. ¹		50,000	
Parking land		240,000	
		600,000	

¹Excluding public areas which are estimated at about 15 percent of building coverage (including streets, malls, etc.).

The purchase of all of the ground area shown above does not have to be supported directly by the enterprises building the physical facilities, of course. Some of the open parking lots would be operated independently of the facilities. Some of this parking land, on the other hand, might be acquired as a part of facility development. For example, a motel will need to have its own parking and so also will the apartment houses (at least in part). An estimated 450,000 square feet of ground area would have to be purchased as a part of garage facility development. Figuring land costs at about 15 percent of overall facility development, there would be somewhere around \$1,500,000 to put into land (excluding the independent parking lots). On the average, therefore, the land would have to be purchased at an average of about \$4.00 per square foot to make the project economically feasible for private enterprise.

These are, of course, rough calculations. It is possible that the projected development could stand a considerably higher land cost than indicated. Even at 20 percent, however, the average land cost could not exceed \$5.00 per square foot.

CHAPTER EIGHT

TRAFFIC AND PARKING

The basic study area for this CBD analysis has been restricted to the Central Business District, the State Street area, and to portions of the University of Michigan South Campus. However, the needs of the immediately surrounding areas must also be considered in analyzing the traffic and parking requirements for this central core area of study. For example, traffic desiring to cross Ann Arbor adjacent to the Central Business District may be forced to pass through the Central Business District if adequate by-pass facilities are not provided where needed.

Another major consideration regards the growth potential of the Central Business District in particular and Ann Arbor in general. For the purpose of these analyses, a relatively active Central Business District has been presumed and reasonable growth has been presumed for Ann Arbor. It must be recognized, however, that the Central Business District traffic activity by 1980 could be even greater than that anticipated in this report if a particularly vigorous improvement campaign is undertaken

immediately. However, the relatively high growth utilized for projection purposes is not likely to be exceeded. The important point here is that the terminal traffic desires in the Central Business District reflect a presumed growth trend, and in actuality this traffic activity can go up or down depending upon what Ann Arbor decided it wants to do.

The Michigan State Highway Department conducted an origin-destination (O-D) traffic survey in the summer of 1960 in Washtenaw County. This was a comprehensive O-D survey providing internal-internal, internal-external, and external-external travel desire data and indicated the existing travel desires throughout the Ann Arbor urban area. For the purpose of testing the proposed central business area plan, these data were projected to the year 1980 utilizing a multiple correlation technique. In the traffic analysis the year 1980 was used where as in the economic analysis 1965 was used. The details of this projection procedure were provided by Harland Bartholomew and Associates' Procedural Outline C.2, but they basically involve analyses of anticipated increases in day and night population, vehicle registrations, and vehicle use by traffic zones throughout the urban area. The projected origin-destination traffic data reflects an anticipated population growth in the Ann Arbor urban area from approximately 67,000 persons in 1960 to approximately 115,000 persons in 1980.

For the purposes of the origin-destination projection, it was presumed that the Central Business District would realize a 50 percent increase in trips (1.50 factor) as a means of determining lane deficiencies. In addition, a number of new or

expanded outlying shopping centers were assumed, including Arborland, Westgate, and Maple Hill.

Prior to critically analyzing the Central Business District traffic, it is necessary to develop travel desire data indicating the over-all urban area travel patterns for the design year of 1980. Special analyses of that traffic desiring to cross or terminate in the central business area are required also. The study procedure utilized for these analyses is commonly referred to as a corridor capacity deficiency analysis. The general procedure is to utilize a series of analysis screen lines throughout the area to determine the total number of desire trips crossing each analysis line section during an average day of the design year. Where appropriate, these desire trips are further categorized to indicate their direction. By comparing the total number of desire trips at each analysis line section with the existing capacity of major streets crossing that analysis line section, it is possible to determine the adequacy of the major street network to accommodate the design year travel desires.

The future major streets were determined on the basis of the existing use of streets within the area by the public, with some extensions to provide the necessary continuity to reflect a network of major streets. From the corridor analysis of 1980 travel desires throughout the entire urban area, data were developed to indicate the 1980 capacity deficiencies at each analysis line section. For the purpose of this analysis, a lane (one-way), without parking, can accommodate 500 vehicles per hour during the peak hour.

The lane deficiencies on two-way streets at the edge of the Central Business District are greatest on the southern portion where an eight-lane deficiency exists. To the west of the Central Business District, there was no lane deficiency in future traffic demand. Very heavy lane deficiencies occur in an east-west direction to the south of the Central Business District (eight lanes of deficiency) and in a north-south direction to the east of the Central Business District. This area to the east of the CBD includes the University of Michigan South Campus and the Medical Center.

A summary of such data regarding the Central Business District 1980 deficiencies indicates that to the south of the Central Business District there are eight traffic lanes provided on the existing major street system. At the present time there are also six lanes of parking on the same streets. This indicates that the 1980 deficiency of eight lanes requires the addition of two more major street lanes for traffic even if parking is removed on these existing major streets. This additional lane capacity can be provided by street widening, by developing additional major streets in the flow demand area or through conversion of other existing streets into major streets. It should be noted that in the core area instances other than south of the CBD, the additional required 1980 capacities can be met on existing major streets if traffic desiring to by-pass the Central Business District is afforded that opportunity. The north-south requirements in particular should be noted. The 14 additional lanes in the core area required to the south indicate a very

high traffic demand for service into the University of Michigan and Medical Center complexes.

These 1980 traffic needs, as determined by the State Highway Department, provide data for testing the street network for any proposed Central Business District plan. The lane deficiencies developed by the corridor analyses indicate the basic 1980 major street requirements for moving traffic smoothly into and out of the various areas. It is particularly important in the Central Business District to include additional lane capacity to provide for circulation and distribution of traffic. The lane deficiencies are one test of adequacy while adequate circulation becomes a second test.

In utilizing the lane deficiencies as a test of any plan, it is imperative to remember those streets which constitute the existing major street network. If for any reason one of these facilities is abandoned or otherwise closed to major street traffic, the capacity of that facility must be replaced by development of another major route.

Some means available for increasing the capacity of the existing major street network are relatively inexpensive. Others can be quite costly. There are two groupings. One consists of increased capacity through traffic control measures and should be utilized to the maximum. The other grouping involves new construction, which is not always feasible in an existing Central Business District. However, in some instances it becomes necessary and is made possible through redevelopment of portions of the area.

In order to simplify the discussions of the major street system and circulation network in the Central Business District, the elements will be discussed regarding their ability to accommodate "through" traffic, terminal traffic and circulation. The plan indicates the proposed street network in the Central Business area. The existing street network is indicated on map II.

The possible development of Packard Street with its connection to First and Ashley Streets and on to Beakes can accommodate much of these anticipated northwest to southeast through traffic movements if terminating traffic is adequately accommodated elsewhere. In addition, the southwest to northeast movements of "through" traffic, as well as the southeast to southwest movements, indicate a need for good major street continuity to the southeast, east and northeast of the Central Business District and/or the core area. This traffic movement generally emphasizes a need for completion of a Central Business District loop facility in that the Packard Street development does not cover the eastern portion of the CBD. Such a facility would in part meet the 12 lane deficiencies to the east of the CBD. Because several alternatives seem to be available for accommodating traffic to the east of the CBD, no unusual traffic burden is anticipated in the CBD due to these "through" traffic movements.

Any development of a CBD circulation system must be closely coordinated with the development of penetrator routes from outside the Ann Arbor area. The proposed developments of State, Huron, and North Main Streets and the new river road as penetrator routes are well adapted to bring traffic from the peripheral expressways to a CBD distribution and circulation system.

The general 1980 traffic requirements to the south of the CBD indicate a need for eight additional east-west lanes of traffic in that area. Six of these lanes can be provided by removing parking on State, Division and Main streets. This still leaves a two-lane requirement by 1980. One method of meeting this east-west deficiency involves the development of a one-way coupling of First and Ashley streets to the west of the CBD. This would require extension of Packard to the south, with a connection to Main Street as well as a connection of Beakes Street to the north. Such a development has the following advantages:

1. It provides a western distributor street making maximum utilization of existing pavements with high intersection capacities due to the one-way streets.
2. It enables good routing of "through" traffic from Packard (extended) and Miller streets while avoiding the heart of the CBD.
3. It enables good southwest to north and northeast major street continuity due to the Beakes Street connection (presuming a southern connection to Main Street).

It would also be desirable to consider eventual railroad grade separations at First and Ashley. At the present time there are approximately four to six train movements per day, although most of the long trains pass at night and do not cause high traffic congestion.

Plate V indicates Main Street closed to traffic and, in effect, replaced by the proposed Packard-First connection. The

capacity deficiency analyses indicate that this would not provide adequate street laneages without the one-way couple of First and Ashley Streets discussed above. Fourth and Fifth Streets are required to accommodate local CBD circulation traffic and do not provide good major street continuity. Thus they cannot meet the additional 1980 traffic requirements for major street laneages. (It should be noted that, in this plan, First and Ashley Streets could both be connected to Packard and extended to the south to an eventual connection to Main Street.)

To the east of the Central Business District there is adequate capacity available for 1980 traffic demands if all existing major streets are utilized. The potential 1980 two-way deficiency can be accommodated by removing parking on Huron, Catherine, and North University. Other possible means of obtaining increased capacities, especially at intersections, include development of one-way couples involving Catherine (westbound) and Ann (eastbound) or involving Huron (westbound) and Washington (eastbound). These possible one-way couples would, of course, require developing adequate connections at their terminals to the east and west. The only area which might prove difficult in this respect is traffic to the east near the Medical Center and University Campus complexes. It would be possible, however, to develop Washtenaw Avenue in conjunction with Forest Avenue and possibly Glen Avenue to provide a connection for the Catherine-Ann couple.

In the previous street suggestion regarding Washtenaw Avenue and Forest Avenue, the possibility of developing Forest Avenue to the south with an eventual connection to Stadium

Boulevard was considered. This potential circumferential development should be investigated in the development of the Ann Arbor Master Thoroughfare Plan. Also, this street might permit eventual connection to the north to Fuller Street.

The expected 1980 four-lane deficiency to the north of the Central Business District can be alleviated by the removal of parking on the existing major streets. Six lanes are available in this manner on Main, Division, and State streets. The connection of Beakes Street to First and Ashley will primarily aid in the removal of "through" traffic from Main Street. This factor has been discussed previously. Some additional capacity will be required to meet local circulation demands, and this will be primarily accommodated by way of Detroit Street to Fourth and Fifth streets.

To the west, the capacity deficiency analyses indicate that Miller, Huron, and Liberty (existing major streets) will be adequate for 1980 normal traffic needs. It may be necessary to remove parking on these streets to accommodate circulation demands within the Central Business District, however.

Within the core of the Central Business District, it is possible to develop several one-way couples to aid traffic flow. Several of these have been discussed previously and include First-Ashley, Miller-Ann, and Huron-Washington. Fourth and Fifth streets provide another possibility which are particularly well situated to be developed as distributor streets to CBD parking areas. William and Liberty streets provide another possibility which should be considered. If Liberty Street is

closed within the CBD, William Street must remain two-way because there is not an adjacent paralleling street to couple with it. State Street is not readily adaptable to one-way operation because there is not an adjacent paralleling street to couple with it. It should be noted that developing of one-way couples within the CBD would not only ease traffic movements but could also reduce pedestrian conflicts at intersections.

The Central Business District development plan indicated on Plate II is generally adequate provided the following developments are undertaken:

1. Extension of Packard and Beakes streets to First.
2. Development of the First-Ashley one-way couple with extensions from Beakes Street on the north to an eventual connection to Main Street on the south.
3. Retention of all other existing major streets and provision of off-street parking to enable removing on-street parking on those streets.
4. Accommodation of peripheral traffic on major streets which do not pass through the Central Business District. This is particularly important to the east of the Central Business District.

The circulation system in the Central Business District should provide for a series of streets ringing the CBD core to assist distribution of traffic destined for various parts of the central area. On the east State Street would continue to carry its share of traffic but it would be necessary to provide additional capacity east of the University of Michigan Campus.

(south). Catherine or the Catherine-Ann couple would provide the northern distributor while the First-Ashley couple would be on the west. The best southern distributor route is William Street or the Packard Street improvement in conjunction with portions of Madison Street.

The future demand for parking space in the Ann Arbor Central Business District is quite dependent, not only upon the future downtown merchandising activity, but also upon the type of retail facilities provided. It is recognized that the provision of parking will not in itself create the future demand, but the future parking requirements are a result of the commercial activity within the CBD. Thus, at the very outset, it is apparent that much of the future demand for parking space in the CBD depends upon what the Ann Arbor CBD decides that it wants to do regarding future growth or change in services.

At the present time there are 4276 parking spaces within the Central Business District. Table 11 summarizes the inventory of these spaces conducted by the City of Ann Arbor. These spaces indicate an existing ratio of one space for every 252 square feet of retail floor area in the Ann Arbor CBD.

Table 11. Inventory of existing parking spaces, CBD.¹

Off-street, private	1430
County lots	191
City lots and structures	1547
On-street	<u>1108</u>
Total	4276

¹All traffic tables have been provided by William S. Pollard Jr., partner in the firm of Harlan Bartholomew.

During the winter of 1959-60, the City of Ann Arbor conducted a survey to determine the utilization of existing parking spaces in the Central Business District. A parker questionnaire survey was conducted at off-street areas in January, 1960, while an on-street turnover-vacancy survey was made in December, 1959. Table 12 summarizes some of the results of these surveys. One recommendation in the report covering the surveys was that 400 additional spaces are required.

Table 12. Ann Arbor CBD parking survey (1959-1960).

Location	: Spaces	: Maximum Use
Packard Street Lot	125	127
Ashley Street Lot	71	68
Washington Street Carport	242	218
William Street Lot	141	140
Fifth Avenue Lot	174	106
On-street Parking	<u>662</u>	<u>598</u>
Total	1415	1257 (89%)

For long-range CBD planning, it is generally necessary to provide for the replacement of all on-street spaces with off-street lots or structures. This is particularly true when street space is needed for the movement of traffic, such as will be necessary on many downtown streets in Ann Arbor, or if all streets are closed for pedestrian malls or other new uses. This indicates that in addition to the necessary additional spaces for future parking needs, planning should be directed toward the provision of 1108 off-street spaces to replace the street space now devoted to parking (see Table 11).

Table 13 indicates the probable 1965 additional parking demand in the CBE based upon the preliminary projections of new building and land requirements. Motels and housing are omitted because they should provide their own parking. Also included in the Table are requirements for replacement of on-street parking as well as the City's estimate of immediate needs.

Table 13. 1965 additional parking space demand.

Type Facility	: Est. Gross : Floor Area	: Gross Floor Area : Per Parking Space	: Req. Parking
Retail Sales	170,000	250	680
Retail Sales	15,000	250	60
Office	<u>60,000</u>	<u>800</u>	<u>75</u>
Subtotal			815
Existing Deficiency			400
Existing Of-street to be Replaced			<u>1108</u>
			2323

On the average, the provision of off-street parking requires from 350 to 400 square feet per parking space. This figure includes areas for driveways, walkways, screenings, plantings, meters, etc. It indicates a requirement of from 815,000 to 930,000 square feet of space to be devoted to parking to adequately accommodate the required 2323 spaces. This much land normally is not available for parking lot developments in a Central Business District due to the high land values. Ann Arbor is no exception.

The cost to provide parking garages depends upon numerous factors including the number of floors, ground coverage, type of operation, and building design. For a typical structure

covering a 100 foot by 250 foot area, the data in Table 14 provides an indication of costs for providing various parking spaces. These values can be contrasted with the cost to develop parking lots. On the average, the development of paved, lighted lots with adequate screening to provide a pleasing appearance ranges from \$1.00 to \$2.00 per square foot exclusive of land. Utilizing the maximum figure with a land cost of \$5.00 per square foot, the average cost per parking space for a lot becomes \$2,800. Of course, with higher land values, this figure would increase more rapidly than the cost per space in a garage, and quite often the total required area for lots simply is not available in a Central Business District. Obviously, for each contemplated parking area a more refined analysis, generally following the above calculations procedure, is necessary.

Table 14. Typical costs for parking structures.¹

No.	Floors	: Land : Cost	: Construction : Cost	: Available : No. Spaces	: Cost per Space
2		\$125,000	\$300,000	120	\$3,540
3		125,000	450,000	180	3,200
4		125,000	600,000	235	3,080
5		125,000	750,000	300	2,920
6		125,000	900,000	360	2,850

¹125,000 sq. ft. coverage at \$5.00 per sq. ft. for land and \$6.00 per sq. ft. for construction.

For the Ann Arbor Central Business District, the estimated 1965 need could be as great as 2323 new spaces, or approximately 900,000 square feet devoted to parking. The CBD plan indicates a total land area of approximately 200,000 square feet devoted

to new parking facilities. This would indicate that each facility would require four or five floors to provide the required number of spaces. It is highly desirable to extend the plan to include more parking area, particularly around the periphery of the CBD. By initially developing such areas as lots, they would then be preserved for future construction of garage structures for long-range parking requirements.

Of course, each area considered for development either as a lot or a parking garage must also be evaluated for convenience to shopper destinations. Typically, parking facilities should be within two minutes walking distance (approximately 400 feet) of the primary centers served, even though shoppers are normally willing to walk distances up to 800 feet. In the Central Business District convenience of parking often becomes as important a consideration as raw economy of construction.

CHAPTER NINE

A DESIGN CONCEPT FOR THE ANN ARBOR CBD

Ann Arbor has made many improvements in its Central Business District area over the years. Whenever it has been possible to acquire land for parking the city administrator has been first to initiate the move so that today all public parking lots and garages are city owned and operated. In addition, of course, there are many private off-street spaces and parking provided by the University of Michigan for its various facilities.

The city has installed, in the fall of 1961, new street lighting in the CBD. It is now possible to drop a coin on the sidewalk at night and see where it rests. Street widenings and street improvements have also been characteristic of the city's interest in its downtown.

The merchants themselves have not been idle over the past few years. A survey was made in the fall of 1961 in the CBD area and showed that some 2.5 millions of dollars have been spent on remodeling of establishments for the past six year period. This remodeling continues at a great pace. With the city on the one hand and the merchants on the other hand working to keep pace with the new demands of residents it would appear that the CBD has the potentiality for a healthy future.

Physically the Ann Arbor CBD is divided into three separate areas, Main Street, State Street and South University. The Main Street area is the original commercial district and still serves the metropolitan area. The State Street commercial area developed as a result of the need for such a special service area contiguous to the University of Michigan. The State Street unit has reached its limits because it is now bounded on the north and south by the University. As the University grew so did the adjacent commercial enterprises. This growth eventually resulted in the development of establishments along South University. This latter area, rather than State Street, has become increasingly identified as the student shopping area in recent years.

There is an area between State Street on the east and Main Street on the west which is likely to become an expansion or connecting link of the CBD. State and Main Streets might be

thought of as the ends of a dumbbell with a bar connecting the two ends. This then becomes one key approach to the CBD problem: to strengthen the ends of the complex while letting the center develop in an orderly and controlled manner and at its own rate.

What will develop in this center area? There should be a certain amount of new commercial activities. Probably, there will be some new office space. Encouragement should be given to new housing development. It now becomes a chicken and egg situation as to which of these interrelated functions will or should dominate this central area. In any event, the solution will not be externally dictated nor will it involve a crude bulldozer approach to the problem.

A much more intensive residential area could develop immediately to the north and south of the CBD area and such a possibility should be encouraged. It would have benefits for both the residential and CBD areas. With the establishment of new high density housing as barriers to the north and south and with the new markets such housing would generate, the CBD could realize a revitalization of business activities. This approach to the CBD problem is not new. Other cities are faced with similar circumstances of CBD decline and are bringing people back to the core area into a new improved living environment.

The Ann Arbor CBD serves as a governmental, financial, and cultural center for the metropolitan area. These functions should be strengthened wherever possible. Ann Arbor is the county seat for Washtenaw County. Municipal and county offices are in the CBD. The major financial institutions of the area also have their offices downtown. The cultural atmosphere of

the CBD could be strengthened greatly. It is now centered largely in the adjacent University. To some extent this is desirable and inevitable. Still, there is need for a city auditorium and perhaps for museums and a city domestic animal type zoo or aquarium. If such new facilities could be developed within the CBD area they would serve to further strengthen the downtown.

An experienced merchant rarely would build a store outside a known market area and stock it with goods in the hope that this act would in itself attract a market which did not already exist about him. The merchant has historically exploited markets which already existed and which for one reason or another were not served satisfactorily. The point is that people (markets) precede commercial development. This has been no less true in Ann Arbor. In early times a central business district was really the only concentrated commercial development serving the city. As the growth of the town forced the edges further away from the downtown shopping area and as automobiles clogged the streets the CBD became inefficient and obsolete. Corrective measures were much swifter in the open spaces on the edges of the city than within the center. Thus, today, the development of a series of suburban shopping centers have exploited a poorly serviced market area. Now that these suburban centers have been established one must ask how much can a downtown merchant be expected to invest for a market which is already well serviced elsewhere? And, how much in the way of public funds can be expected for such a purpose from a municipality which is responsible to both the city and its suburbs?

If the downtown merchant begins to compete for his lost market under the same conditions that existed when he lost it he finds that he is at great disadvantage. He, by himself, cannot make the same sweeping changes for efficiency and customer convenience which are the very essence of attractiveness in the suburban shopping centers.

In Ann Arbor the downtown merchant can compete if he will make a more sophisticated analysis of the market potential. If he does so he will discover that certain markets are not satisfied in suburban conditions. He can compete for a significant part of the market because suburban commercial centers could never come close to matching several unique and attractive features of Ann Arbor's downtown area. This means that the unique features of the central area of Ann Arbor are going to have to be carefully scrutinized and the potentials for exploiting those special qualities made clear to merchants and public alike. It may be necessary to demonstrate to the community that a healthy CBD is necessary to a healthy community so that the people and their elected representatives will not only allow but will encourage more changes and revitalization to take place downtown.

The University of Michigan is growing and all projections indicate it will continue to grow, perhaps even at an accelerated rate. It is literally on the very edge of Ann Arbor's CBD. Its perimeters are essentially of a residential or housing nature. In the future more of the area of the city around the University could serve the growing close-in living needs of the University faculty, staff and student as well as the related

special research functions of private corporations. Encouragement of private initiative to meet this potential might well result in higher density living facilities such as town houses, apartment towers, garden-type apartments and hotels surrounding the CBD area as walls enclosing or defining an area. Office buildings or research building complexes among or adjacent to some of the housing areas appear to be feasible. Threading through this network of structures would be a system of urban parkways, squares and/or pedestrian plazas leading to the University and the CBD facilities. Such changes could result in a new, integrated urban community atmosphere which would be mutually beneficial to all concerned.

Perhaps the CBD's most stable aspect at the moment is the fact that it is a financial, office and governmental center. These are all community functions which strongly reinforce the fact that the CBD is truly the geographical center and symbolic central identity of Ann Arbor. No outlying shopping center can ever approach this phenomenon. On the basis of these special functions alone one could rationalize a great effort to improve all community access routes into the CBD and to instigate a program to re-affirm the importance of the central city image in the community as a whole.

All existing potentials for the future CBD will be forfeited if an orderly and efficient movement and storage of automobiles is not made an integral part of the solution. There are elements of traffic efficiency already existing in Ann Arbor. In many instances the problem here is one of coordination, of boldly

connecting these already established elements and to thereby exploit their full potential. From the west, approaches to the central area of the city seem to work very well now and will satisfy future needs. There are three main radials, Miller (northwest), Huron (west), and Liberty (southwest). Where these streets converge on the CBD they need to connect with better local circulation to the north and south around the CBD.

From the south Packard merges with State and Main with good efficiency. However, Packard might better connect with Madison and then line up with First to continue the easy flow of traffic bypassing Main Street. From the north, Main Street and Beakes merge to serve as an adequate approach to the CBD.

From such existing features and potentials and within the limits of economic feasibility it is entirely possible to develop a coordinated scheme of development and redevelopment which will lead the CBD to realistic and desirable (and profitable) goals in the future.

In many cities the CBD has lost its once dominant economic position. To reverse this trend which is also evidenced to some extent in Ann Arbor something dramatic must be done. A first step is comprehensive planning, with emphasis on downtown revitalization. But, after all the objective analyses have been made, after the economic potentials and limitations have been defined, after the traffic solutions have been prescribed, there remain the questions of the "plus" factors: the added features which will make the CBD more than just the equal of the suburban shopping center. It is here that we must add the factor of

imagination to the elements of fact in creating a total central environment which will be physically and visually stimulating as well as commercially and professionally attractive.

The mall or parklike pedestrian way has come into the picture downtown as one such stimulant. A few mall experiments have included serious attempts to evaluate the effects of the elimination of vehicular traffic, while others have been merely retail trade promotion schemes of a temporary nature. The serious experiments frequently have led to comprehensive mall proposals and have been interrelated with other physical improvements such as traffic diversion, improvement of mass transit, automobile storage, and consolidation of land uses.

Malls have been proposed by many sources in various communities. It may be that the idea took hold in Ann Arbor after a business man visited European cities where automobile traffic is less critical than in America and where attractive pedestrian ways have been in use for some time. More likely the mall idea for Ann Arbor was originated by the planning staff or by a private consultant.

The downtown problem is not confined to new retail competition. It is also related to the physical limitations of the CBD and the attitudes of people doing business there. There are many important factors. One is street patterns. Business districts developed along streets laid out with no particular regard for the use of land. Another factor is traffic. Downtown streets have been called upon to handle both through traffic and that generated by the CBD. A third factor

is physical deterioration. Stores in older downtown sections become obsolete and characteristically have upper floor vacancies. Still another factor is absentee ownership. Ownership in the CBD is fragmented while shopping centers often have only one owner. This is a special problem of development downtown. It makes necessary a concerted action by independent merchants in the business community as a whole, many of whom have long viewed their neighbor as a competitor. A fifth factor is mixed land uses. While downtown offices and other commercial activity may complement retail uses in the same area, other non-retail activity generates excessive truck traffic, noise and other detriments to the CBD. Factor number six is parking. Merchants tend to blame their problems on this one factor to the exclusion of others. A seventh factor is the lack of area for expansion. Central business districts tend to be confined to certain narrow limits by residential and other land uses. A last factor may be appearance. Uncoordinated central areas have been noticeably lacking in aesthetic qualities.

The mall concept, as a physical design assumption, separates pedestrians and automobiles and will permit new physical and aesthetic amenities in the CBD. The concept of an area set aside for pedestrians is not new. Greek and Roman designers built arcades and covered walks as integral parts of their public and business places, the agoras and forums. Many early-day New England villages had central village greens. Many midwestern county seat towns still have central parks or courthouse squares surrounded by retail frontage. The typical

early-day American western towns had covered walks to protect the people from sun and rain. The effective separation of areas for the exclusive use of pedestrians was demonstrated by such urban complexes as Rockefeller Center. After World War II, Rotterdam and Coventry rebuilt their devastated CBD's so that pedestrians and vehicles were separated. Mall schemes have been tried more recently in the CBD's of several American cities: with considerable success in Kalamazoo and Miami; with less success in Toledo.

Where the mall concept has been studied as an integrated part of central business districts solving parking and traffic circulation and where the designing of all the parts of the mall serve the pedestrian traffic, malls have been successful. Where malls have been built as a gimmick to draw people to the area disregarding the functions of a mall they have been unsuccessful. It is not merely the planting of trees and flowers but rather malls are as important a function as the street.

A study of mall feasibility in the Ann Arbor CBD must consider the characteristics of the downtown area and also of the entire community. Such a study should include (1) population, its size, average and total, income, social characteristics and growth; (2) the quality of merchandising, individually and collectively; (3) the appearance and obsolescence of stores and other buildings and their structural flexibility; (4) circulation of pedestrians, cars, and mass transit vehicles; (5) economic forces such as wage scales, interest rates, ease of financing and land costs, (6) merchandising changes and effects of changes such as supermarkets and self-service stores.

The Ann Arbor Study has given all these problems considerable study. They seem to support the possibility of extensive use of malls in the design aspect of the overall study. Liberty Street has from the beginnings of Ann Arbor been the visual symbol of the connection between the city and university. This street is now to take on the mall treatment. This involves more than just the closing of a street and the planting of grass and trees. Demolition of existing buildings and the moving of present functions or establishments some 50 to 100 feet in various directions may be involved in the ultimate area re-design. The present street paving and sidewalk will be removed as part of the completely reorganized design of walks as they relate to stores. Continuous concrete ribbons will be minimized. In some cases the only concrete area will be in the form of a corridor from the former street to the shops with plantings and other arrangements on either side of the walk. Perhaps the use of the "moat" concept will be employed in some cases. A "moat" is a walk way over an open area which may be filled with a pool of water. A concrete ribbon abutting each establishment is not necessary nor is it even desirable in many locations. There are loan companies, dry cleaners, diaper services, and similar functions which have no use for window display. Their immediate area might become an area of imaginative design and aesthetic realization of nature which enhances the total downtown atmosphere.

There are a great many idfferent types of land uses along this (Liberty) street. To complicate matters more there are many ownerships of land and property in the area. The mall

here may be said to be a beautiful "dream plan", which may never see even its first stage of implementation, but it is nonetheless recommended as part of the final solution.

Main Street is also proposed as a mall from William Street north to Huron Street. This involves a much shorter distance than the Liberty Street mall and has perhaps the best chance to materialize. The Liberty Street mall comes as first priority in the staging of the "CBD Master Plan" because of an East-West stimulus needed for guiding the locations of future developments. Main Street mall is conceived for execution many years in the future. An early phase of implementation for Main Street is the narrowing of the street by some 12 feet and the planting of trees in this area with the elimination of parking from the street. This phase will be accomplished after the extension of Packard Street to First Street to accommodate the through traffic around the CBD.

The objectives of the Central Business District Study is to make it a more efficient place to move about and conduct business activities, to make it a more attractive place to shop, to promote more diversified activities within this area and to encourage new investments in the CBD with an eye to strengthen and raise the municipal tax base. Keeping these objectives in mind the city and the Chamber of Commerce will begin the redevelopment of the Ann Arbor CBD.

The Chamber of Commerce will be the organization which will promote the physical aspects of the final design solution. Close coordination between the merchants and the Chamber of

Commerce will be essential not only as the physical change takes place but also in the educating of the merchants on present and future merchandising methods. In the final analysis it will be a joint effort on the part of all the interested people in the CBD to work together for the continued health and prosperity of the central business district.

The city, through its Capital Improvements Program, will be able to initiate the first stages of the study. Through the city's effort the parking along with the improvement of streets can begin in the early fall of 1962.

Methods of financing the implementation of the CBD Study may be limited to private financing as it is seen at this time. Ann Arbor's philosophy is that if improvement is needed they will finance it. It is extremely doubtful that Federal Government money will be used.

Ann Arbor's Central Business District to date can be considered, in comparison to many other CBD's, on the whole a relatively sound area. There is at the present time much remodeling of old establishments and this trend will continue. However the important factor which must not be overlooked is that a new department store plus some dramatic and exciting physical changes must take place. In all probability either a Sears or a Federal Department Store will be built downtown. It then appears that Ann Arbor's CBD will materialize as a most successful effort and the Central Business District Study was money well spent.

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APPENDIX

GROSS SQUARE FOOTAGE RETAIL SALES AND SERVICE AREAS.
ANN ARBOR CENTRAL BUSINESS DISTRICT 1960
MAIN STREET CENTER

	No. : of Est. ¹	No. : of emp. ²	Floor space occupied			
			Basement:	1st. fl.:	upper fl.:	Total
Shoppers Goods	111	1009	169,600	309,900	136,800	669,630
Convenience Goods	61	560	44,300	110,800	5,100	159,340
Other Retail Outlets	34	280	8,300	99,100	18,700	126,850
<u>RETAIL STORE TOTAL</u>	<u>206</u>	<u>1849</u>	<u>222,200</u>	<u>519,800</u>	<u>210,600</u>	<u>954,820</u>
Personal Services	49	278	15,900	60,200	26,400	102,790
Repair Services	15	70	10,900	38,700	2,700	52,560
<u>RETAIL SERVICE TOTAL</u>	<u>64</u>	<u>348</u>	<u>26,800</u>	<u>98,900</u>	<u>29,100</u>	<u>154,350</u>

¹ Establishments.

² Employees.

Sources: 1961 Field Inventory.

GROSS SQUARE FOOTAGE EXCLUDING RETAIL SALES.
ANN ARBOR CENTRAL BUSINESS DISTRICT 1960

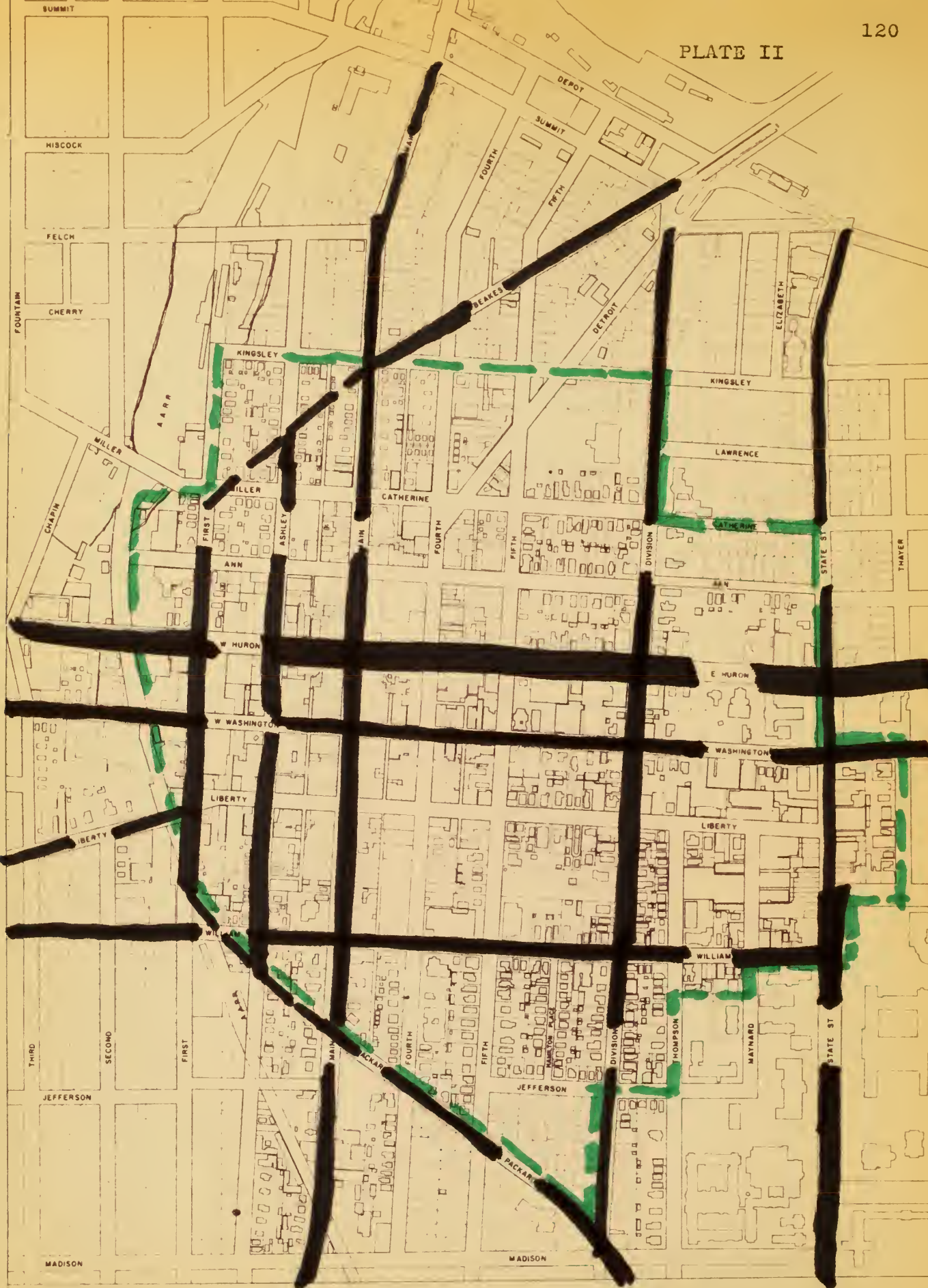
	No. : of Est.	No. : of emp.	Floor space occupied			
			Basement:	1st. fl.:	upper fl.:	Total
Office	254	1977	123,600	246,500	286,800	657,770
Recreation, Hotels, etc.	11	114	13,200	37,600	73,500	124,380
Industrial	57	921	76,000	148,400	141,900	365,850
Residential	333		220,900	315,300	324,200	853,620
Miscellaneous	161	126	208,600	115,400	176,800	500,880
<u>TOTAL EXCLUDING RETAIL</u>	<u>816</u>	<u>3138</u>	<u>642,300</u>	<u>863,200</u>	<u>1,003,200</u>	<u>2,502,500</u>
<u>TOTAL MAIN STREET BUSINESS CENTER</u>	<u>1086</u>	<u>5335</u>	<u>891,300</u>	<u>1,481,900</u>	<u>1,242,900</u>	<u>3,611,670</u>

GROSS SQUARE FOOTAGE RETAIL SALES AND SERVICE AREAS.
ANN ARBOR CENTRAL BUSINESS DISTRICT 1960
STATE STREET BUSINESS CENTER

	No. :	No. :	Floor space occupied			
	of :	of :	Est. :	emp. :	Basement :	1st. fl. : Upper fl. : Total
Shoppers Goods	63	527	62,100	108,480	31,800	207,490
Convenience Goods	21	248	14,300	55,800	6,100	76,160
Other Retail Outlets	8	102		57,900	2,300	60,020
<u>RETAIL STORE TOTAL</u>	92	877	76,400	222,180	40,200	343,670
Personal Services	32	131	8,800	22,700	8,200	39,570
Repair Services	4	6		700	700	1,330
<u>RETAIL SERVICE TOTAL</u>	36	137	8,800	23,400	8,900	40,900

GROSS SQUARE FOOTAGE EXCLUDING RETAIL SALES.
ANN ARBOR CENTRAL BUSINESS DISTRICT 1960
STATE STREET BUSINESS CENTER

	No. :	No. :	Floor space occupied			
	of :	of :	Est. :	emp. :	Basement :	1st. fl. : Upper fl. : Total
Office Total	82	377	22,500	28,200	50,700	101,100
Recreation, Hotels, etc.	5	54	7,400	33,500	11,300	52,100
Industrial	8	101	13,100	13,700	16,500	43,150
Residential	39		76,100	97,600	132,000	305,800
Miscellaneous	23	45	47,500	31,500	28,900	107,920
<u>TOTAL EXCLUDING RETAIL</u>	207	577	166,600	204,500	239,400	610,070
<u>TOTAL STATE STREET BUSINESS CENTER</u>	335	1591	251,800	450,080	288,500	994,640



Major streets in CBD
CENTRAL BUSINESS AREA

Limits of CBD

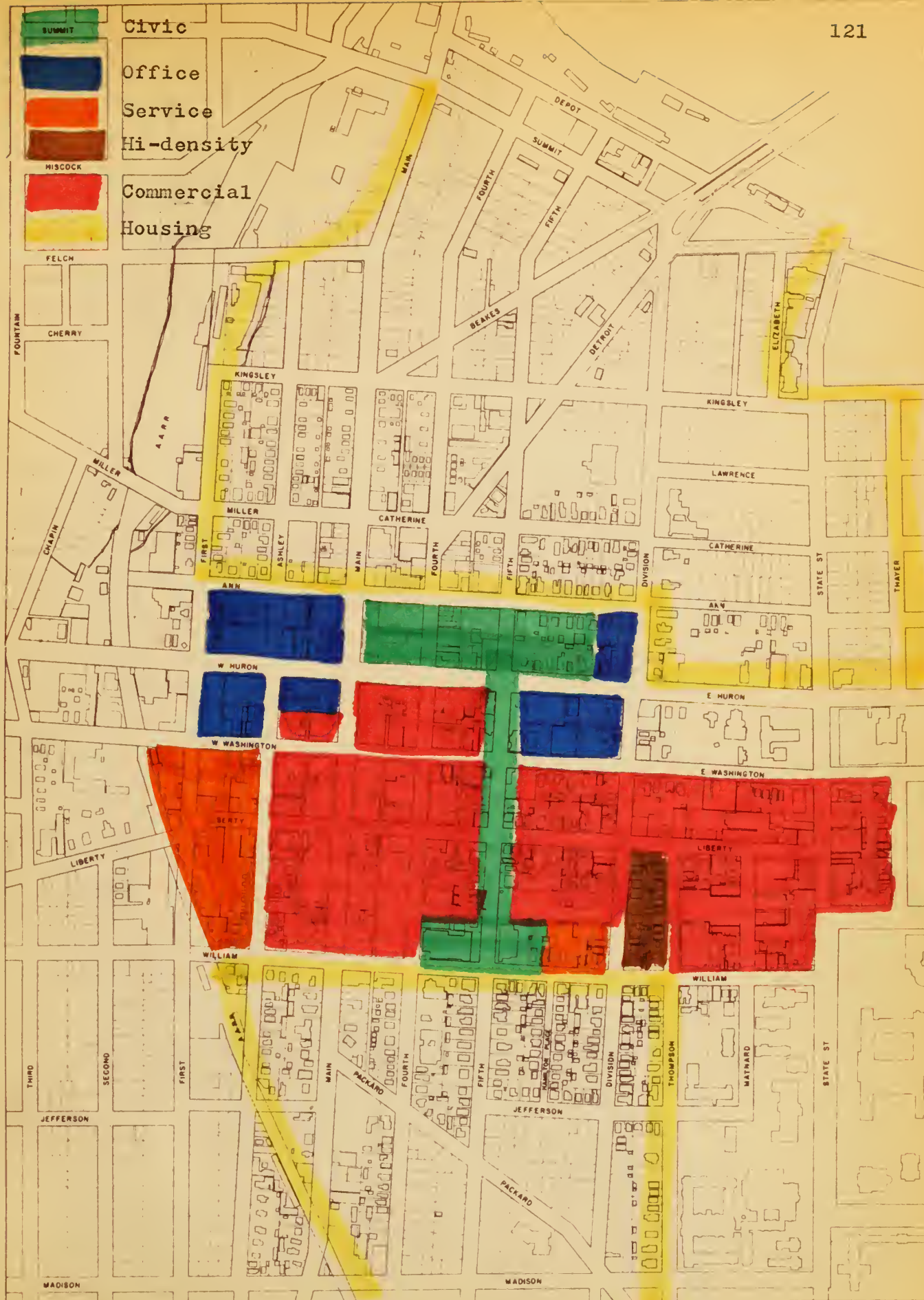


PLATE III FUTURE GENERAL LAND USE

CENTRAL BUSINESS AREA



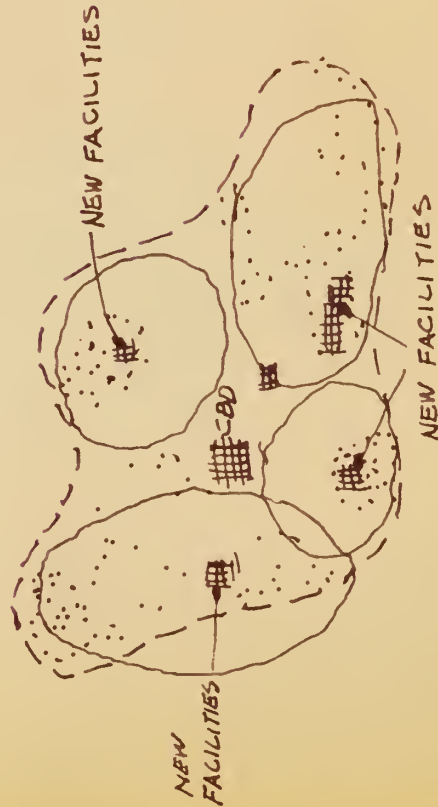
1. 50 YEARS AGO



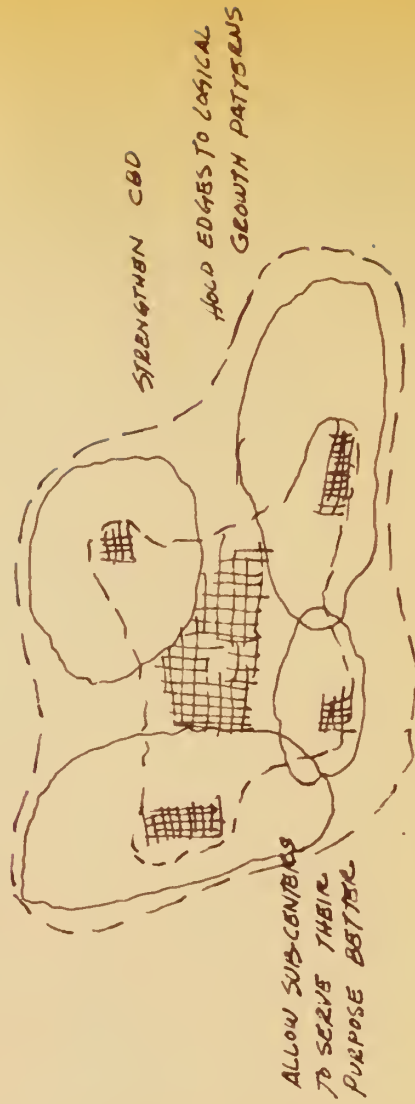
2. 30 YEARS AGO



3. 10 YEARS AGO



4. TODAY



5. FUTURE

ANN ARBOR, MICHIGAN AS POPULATION INCREASES

PLATE IV



Mall treatment



PLATE V

STREET DIRECTIONAL
SYSTEM

THE UNIVERSITY
OF MICHIGAN

S. University





PLATE VI

PENETRATOR ROUTE

CBD

MEDICAL CENTER

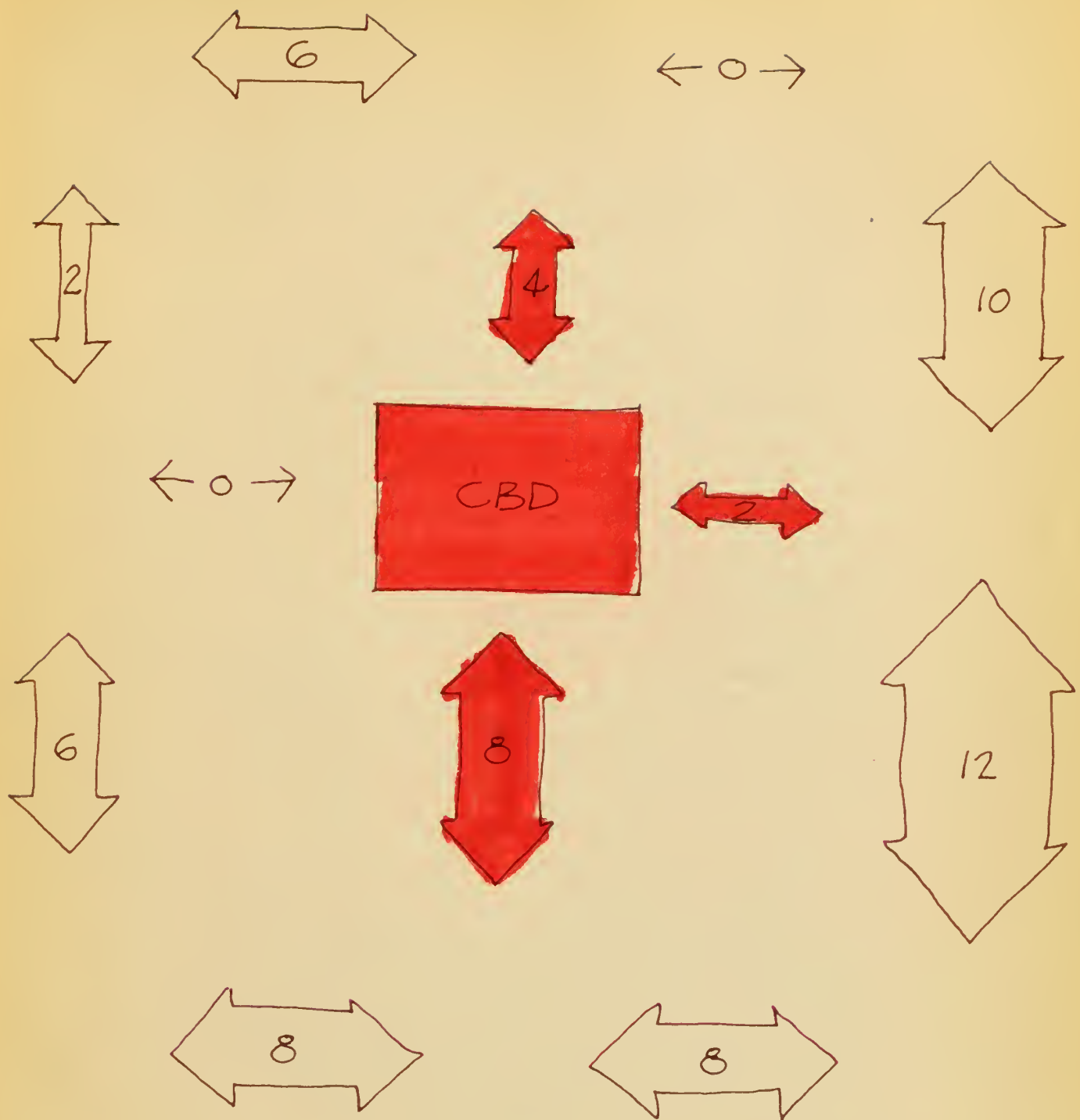


PLATE VII

1980 TWO-WAY LANE DEFICIENCIES

Based on 500 V.P.H./lane

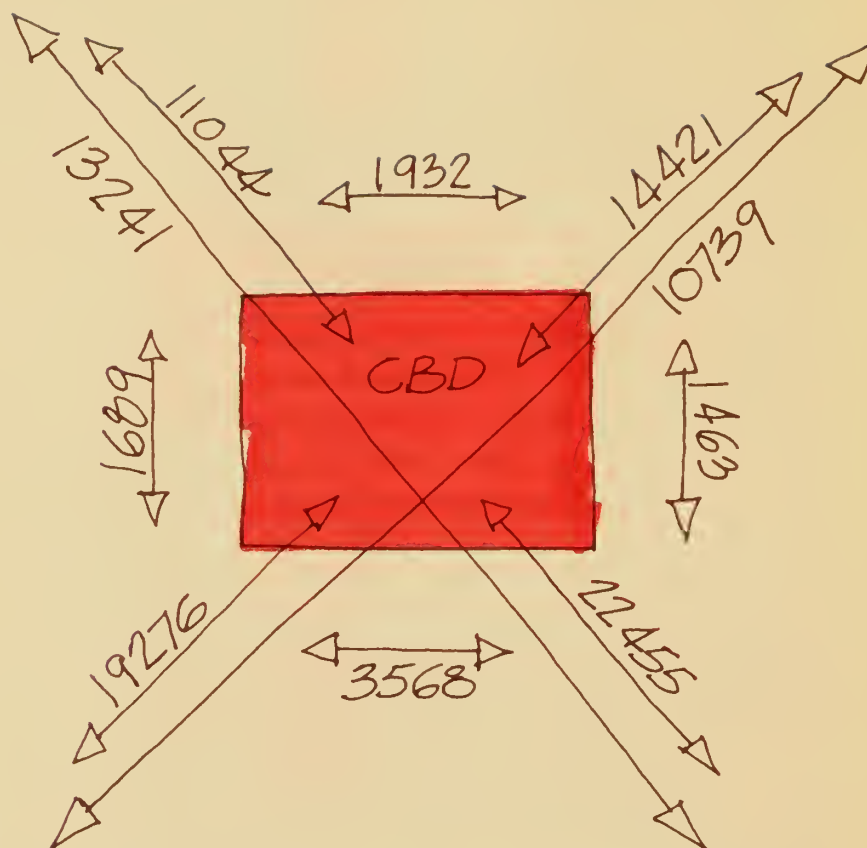


PLATE VIII

CBD ORIENTED 1980 DESIRES

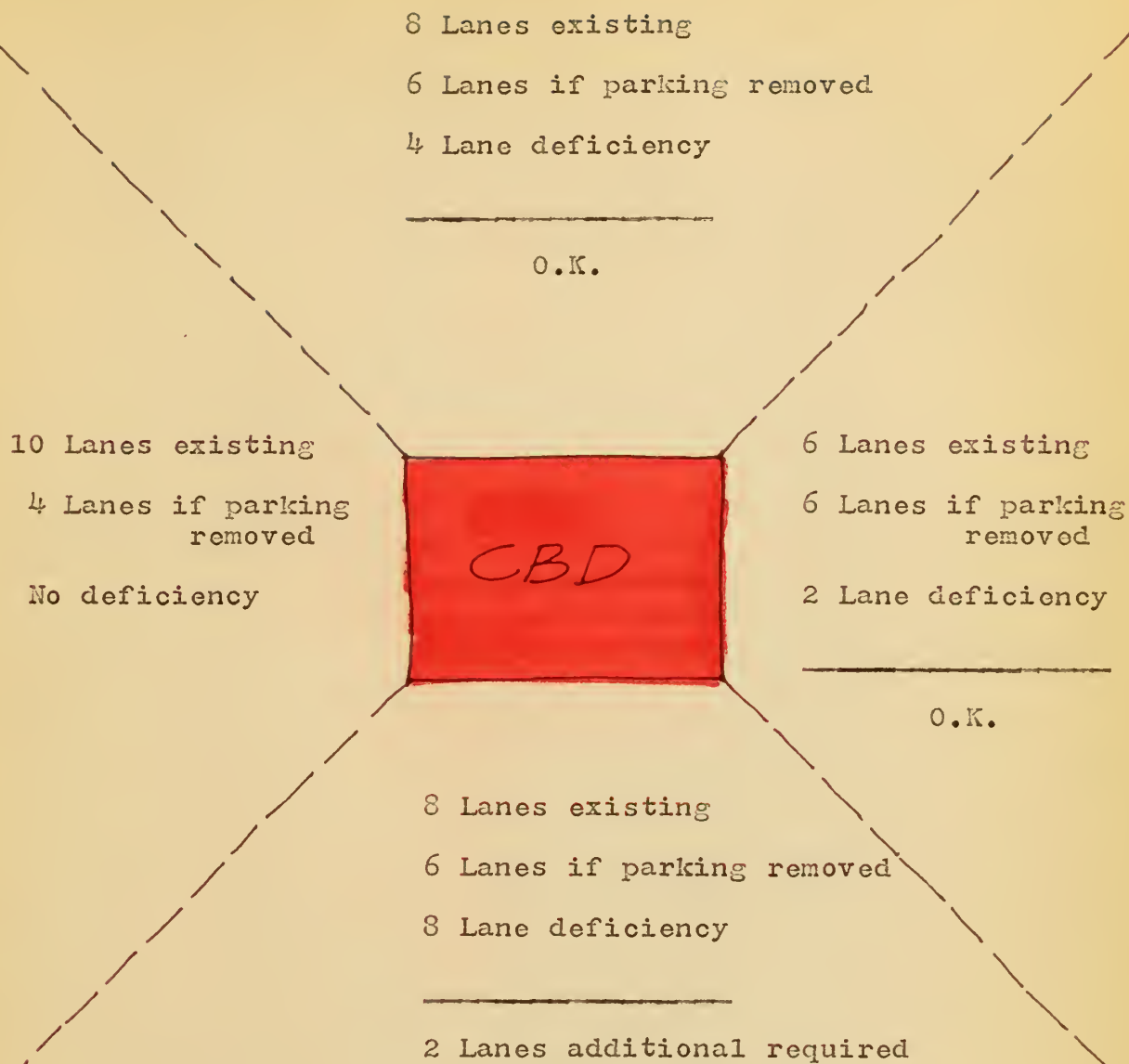


PLATE IX

SUMMARY OF CBD 1980 DEFICIENCIES

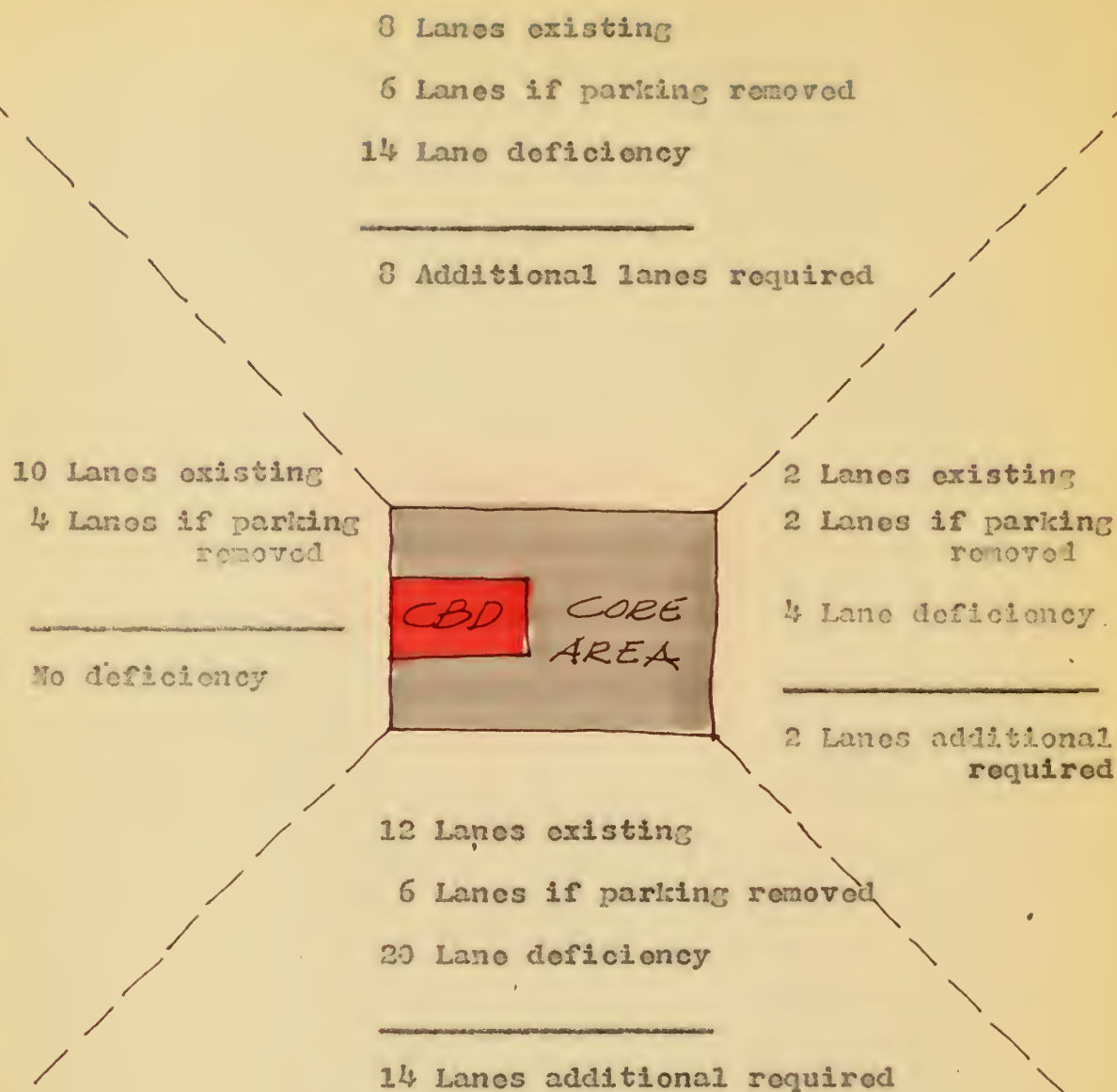


PLATE X

SUMMARY OF CORE AREA 1980 DEFICIENCIES

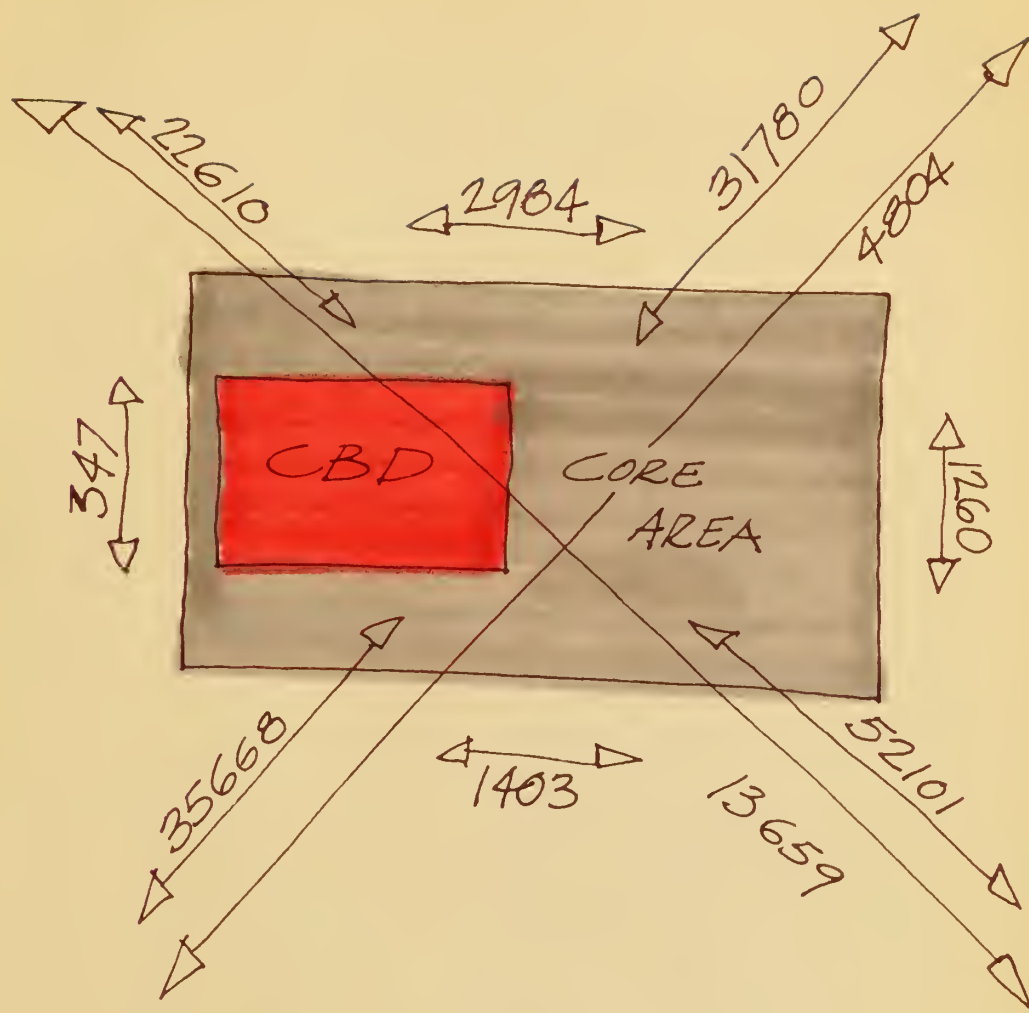


PLATE XI

CORE AREA ORIENTED 1980 DESIRES

REJUVENATION OF CENTRAL BUSINESS DISTRICTS:
CASE STUDY IN ANN ARBOR, MICHIGAN

by

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B. S. in Architecture, University of Kansas, 1954
M. A. in Architecture, Kansas State University, 1960

AN ABSTRACT OF
A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF REGIONAL PLANNING

Department of Architecture and Allied Arts

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1962

Central business district is a term used to describe the commercial, office and governmental functions which tend to group in the central portions of the city. The initials CBD are used in abbreviated form to denote this area.

When cities began they developed about a central core. This core was made up of a few streets, a city park and perhaps an area set aside for a jail. The main street of this early development was where the commercial activity of the city revolved. It may have started with a general store.

The problem facing cities today is one of revitalizing the CBD area. Over the years this area expanded until it covered an "x" number blocks area in the center of the city. The years passed with a great many technical advances taking place, most notable of which was the automobile. Many of these buildings which were built before the advent of the automobile stand today. These buildings have become obsolete and have deteriorated from the standpoint of safety to the people and also in regard to merchandising facilities and methods. Ann Arbor, Michigan is no different in this respect than every American city.

Ann Arbor is physically divided into three shopping districts in its CBD area. Main street is the major section of the three districts and the oldest, State Street and South University are contiguous to the University of Michigan campus. Main Street services the metropolitan area and offers a great variety of merchandise. State Street is more oriented to the University student but has been, through the past few years,

catering more and more to the permanent residents of Ann Arbor. South University is the youngest of these three districts and almost exclusively caters to the University students.

This thesis involves a detailed physical and economic analysis of the Ann Arbor CBD and of methods which might be used to revitalize it as a vital community center. If nothing dramatically is done physically to the CBD, there will be some eight million dollars in markets which will be captured by the new suburban shopping centers during the next five years. This would mean a number of small marginal merchants in the CBD will have to close their doors and it would further mean that there would be less profits to other merchants. Concern over the shopping center competition has made a CBD Study necessary. The Ann Arbor Study was jointly financed by the city and the Chamber of Commerce.

A great many cities are engaged in or will be starting a CBD Study. Some of the unsuccessful solutions tried in the past have been from one extreme to another--from placing flower pots on parking meters to setting up carnivals downtown.

This thesis can be of assistance to those communities on the verge of starting a CBD Study and will help them to think more thoroughly about the true complexity of problems in revitalizing a central business district.